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1965-66

DEPARTMENT OF
PUBLIC
WORKS



ANNUAL REPORT

1965 - 1966



ANNUAL REPORT
of the
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

JUNE 30, 1966

JOHN F. SHELLEY_____ **Mayor**
THOMAS J. MELLON_____ **Chief Administrative Officer**
S. MYRON TATARIAN_____ **Director of Public Works**

Material compiled by John A. Jelincich, Bureau of Engineering

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Cover Photo Courtesy of State Division of Highways

MAYOR
JOHN F. SHELLEY

**CHIEF
ADMINISTRATIVE
OFFICER**
THOMAS J. MELLON

DIRECTOR
S. MYRON TATARIAN

DEPARTMENT OF PUBLIC WORKS



CITY AND COUNTY OF SAN FRANCISCO

JUNE 30, 1966
ORGANIZATION CHART

**BUREAU OF
ENGINEERING**
CITY ENGINEER
CLIFFORD J. GEERTZ

**BUREAU OF
ARCHITECTURE**
CITY ARCHITECT
CHARLES W. GRIFFITH

**BUREAU OF
BUILDING
INSPECTION**
SUPERINTENDENT
ROBERT C. LEVY

**ASSISTANT
DIRECTOR**
ADMINISTRATIVE
R. BROOKS LARTER

**GENERAL
OFFICE**

**BUREAU OF
ACCOUNTS**
SUPERVISOR
JUN IWAMOTO

**PERSONNEL
ADMINISTRATION**
SUPERVISOR
ALBERT C. AMBROSE

**CENTRAL PERMIT
BUREAU**
SUPERVISOR
GILBERT H. BOREMAN

**ASSISTANT
DIRECTOR**
MAINTENANCE
AND OPERATION
ARVID H. EKENBERG

**BUREAU OF SEWER
REPAIR & SEWAGE
TREATMENT**
SUPERINTENDENT
WALTER B. JONES

**BUREAU OF
STREET REPAIR**
SUPERINTENDENT
CHARLES F. McFADDEN

**BUREAU OF
BUILDING
REPAIR**
SUPERINTENDENT
JOHN S. RUTHERFORD

**BUREAU OF
STREET CLEANING
AND PLANTING**
SUPERINTENDENT
BERNARD M. CROTTY

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE
DIRECTOR OF PUBLIC WORKS

January 4, 1967

360 CITY HALL
SAN FRANCISCO
CALIFORNIA 94102
Annual Report
1965-1966

Mr. Thomas J. Mellon
Chief Administrative Officer
City and County of San Francisco

Dear Mr. Mellon:

In compliance with the provisions of Section 20 of the charter of the City and County of San Francisco, I submit the annual report of the Department of Public Works for the fiscal year ending June 30, 1966.

During the year, the Department awarded 418 contracts for a total bid amount of \$27,449,986. These figures represent an increase of 13% in the number of contracts and an increase of 21% in the value of the contracts awarded.

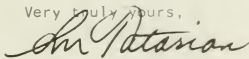
Major projects completed or under construction include Street Work in and Around the Golden Gateway Redevelopment Area, Improvements at McLaren Park, Marina Small Craft Harbor, Southeast Sewage Treatment Plant Effluent Outfall Sewer, Improvements at the San Francisco Zoo, Palace of Fine Arts Reconstruction, Bayview and Westside Health Centers, Pathology Building at the San Francisco General Hospital, Junior Boys Facility at Log Cabin Ranch, Brundage Wing of the M.H. deYoung Museum, Headquarters Building for the San Francisco Fire Department, Rehabilitation of the Social Services Building at 1680 Mission Street and Diamond Heights School.

Private building activity continued at a high volume during the year with 13,337 building permits issued for construction work estimated to cost \$191,920,115. These figures represent a reduction of only 1% in the number of permits issued but an increase of 11% in the total estimated cost.

Unusual activities during the past year included the completion of all the field work associated with the Downtown Parking and Traffic Survey. The data gathered therefrom is now being analyzed and a final report will be completed shortly. Also, in this past year, we have expended considerable effort on studying the means for abating the pollution of ocean and bay waters during rainy conditions. Through financial aid furnished by the federal government, private consultants, specializing in research and laboratory facets, have been engaged to work with the personnel of this Department. It is to be noted, too, that in this past year, we have devoted much attention toward finalizing traffic routing considerations and designs for reconstruction of underground facilities in anticipation of the actual construction of the rapid transit system.

The Assistant Directors, the Bureau Heads, their staffs and the personnel of the Department are commended for their fine efforts and co-operation. I also wish to express my appreciation to you for your generous help and support in matters concerning the Department.

Very truly yours,



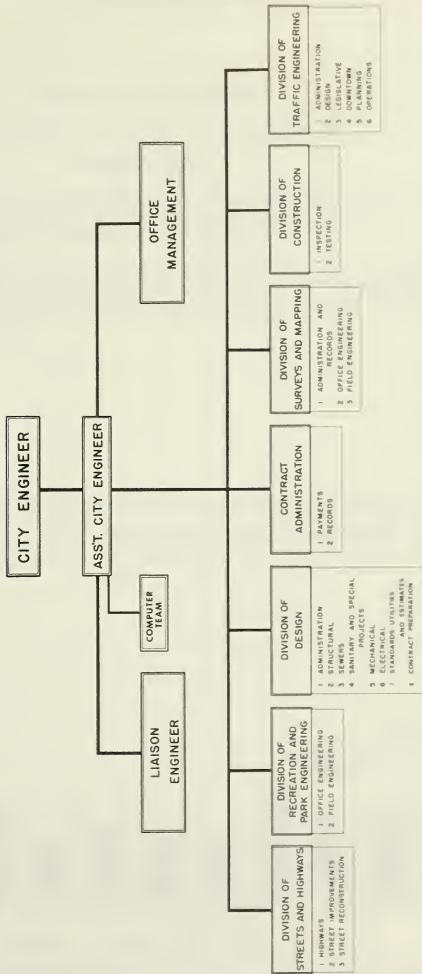
S. M. Tatarian
Director of Public Works

ORGANIZATION CHART

BUREAU OF ENGINEERING

DEPARTMENT OF PUBLIC WORKS

JUNE 30, 1966



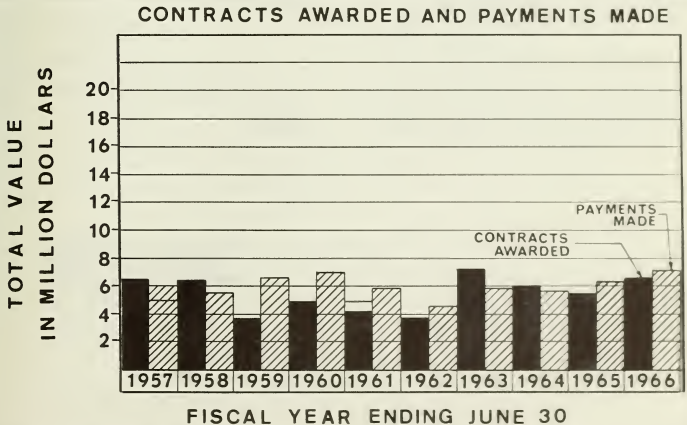
BUREAU OF ENGINEERING

Clifford J. Geertz, City Engineer

GENERAL DATA

The Bureau of Engineering processed and awarded 126 contracts with an aggregate value of \$6,627,000. Contract payments amounted to \$7,134,000.

The number of contracts awarded increased slightly over the 1964 - 1965 fiscal year with the value of awards and amounts expended increasing by approximately 23% and 14% respectively.



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BUREAU OF ENGINEERING CURRENT CONTRACT DATA SUMMARY

Showing All Contract Work Awarded or Underway

July 1, 1965 - June 30, 1966

TABLE	TYPE OF CONSTRUCTION	CONTRACTS AWARDED		AMOUNT EXPENDED FISCAL YEAR 1965 - 1966
		NO.	AGGREGATE VALUE	
A	Major Thoroughfares	3	\$ 574,923.73	\$ 725,485.09
B-1	Streets - Private Contracts	13	227,900.00	295,080.00
B-2	Streets - Assessment Proceedings	6	204,217.93	450,861.00
B-3	Streets - Public Contract City Pay	15	498,704.37	538,194.20
C	Traffic Signals and Channelization	4	124,887.39	264,050.08
D-1	Sewers - Vitrified Clay and Concrete	6	717,600.70	884,278.15
D-2	Sewers - Concrete Monolithic	3	1,471,601.00	733,958.88
E	Recreation-Park	18	1,038,953.37	1,290,309.85
F	Miscellaneous	45	1,708,782.93	1,892,583.05
G	Informal Contracts	13	59,772.85	59,692.85
	TOTALS	126	\$6,627,344.27	\$7,134,493.15

ENGINEERING PLANS AND
SPECIFICATIONS FOR
BUREAU OF ARCHITECTURE
53 CONTRACTS

\$ 843,805.00

GRAND TOTAL

\$7,471,149.27

PROJECTS OF GENERAL INTEREST

MARINA SMALL CRAFT HARBOR

San Francisco with over 20 miles of deep water shoreline, virtually in the center of Bay Area marine activity, and at the entrance to a world-famous harbor has for many years been without a satisfactory pleasure-craft harbor.

A 1-1/2-million-dollar loan by the State Division of Small Craft Harbors, approximately \$400,000 in City appropriations to date, and designs, plans, and specifications prepared by both the Consulting Civil Engineering firm of Hutchison and Hayes & Little and the Bureau of Engineering has significantly changed this condition.

What was referred to for many years as San Francisco's "Yacht Harbor" was a small sheltered basin on the northern San Francisco shoreline and east of the Presidio. It was dredged occasionally and contained floats which were installed and maintained by the berth holders. The result presented a forlorn spectacle relieved only by the elegant appearance of some of the yachts at their moorings. The only redeeming feature as far as the boat owners were concerned was the extremely low rent that they were required to pay for the space.

The new "Marina Small Craft Harbor" is a definite aesthetic improvement and now accommodates 680 boats, more than double its former capacity. The increase was made possible by the acquisition of certain underwater lots in a little used inlet immediately west of the Fort Mason piers and north of the historical old "gas works", building. Gas House Cove, as it is aptly named, was protected by the installation of two concrete sheet pile breakwaters across its seaward side.

It was in the Gas House Cove portion of the Harbor that the biggest problem of the entire project became evident after completion of the work. Immediately after the boats moved into their berths, many of them, especially those that were inexpertly moored, were buffeted about in a manner not commensurate with the sheltered nature of the area. It soon became apparent that unless extra precautions were taken by the boat owners in mooring their craft the water surge occasionally present in certain berthing areas would produce undue strain and wear on the mooring lines.

An oceanographic consultant has been appointed to make a study of the problem and to make a recommendation for its correction. It is hoped that it will not be too long before the corrective measures are completed for control or reduction of the effects of the surge. After which Gas House Cove could very well become one of the best mooring areas in the Bay Area.

At this writing that portion of the entire project completed are the dredging, breakwaters, mooring piles, boat hoist, floats, utilities, lighting, and replacement of a portion of the masonry seawall near the lighthouse.

Under construction are parking areas in the Gas House Cove area with a capacity of 293 automobiles.

To be installed under concession contracts prepared by the Recreation and Park Department are a top quality restaurant, a fueling float, and a boat chandlery.

Planned for future construction are security gates, extension of the Harbor Master's building, replacement of the Marina Boulevard seawall landscaping, paving, and irrigation.

The ultimate cost for the entire project as presently planned is expected to be about \$2,300,000 which includes improvements to the general area not directly connected to berthing facilities.



MARINA SMALL CRAFT HARBOR
AERIAL VIEW OF WEST HARBOR
LOOKING WEST



WEST HARBOR
VIEW OF FLOATS AND BERTHS

EAST HARBOR ENTRANCE
EAST FROM SEA WALL
SHOWING BREAKWATER



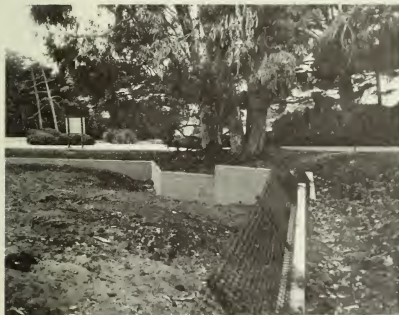
EAST HARBOR
FLOATS AND BERTHS
SOUTH FROM SEA WALL

RETAINING WALL AT DEER PADDOCK
SAN FRANCISCO ZOOLOGICAL GARDENS

This year's major Zoo improvement, constructed in accordance with the Master Plan and Program for the Development of the San Francisco Zoological Gardens, provides the public with an unobstructed view of the axis deer by replacing a galvanized chain link perimeter fence with a dry moat. The dry moat consists of a turfed bank on the paddock side and a concrete block retaining wall on the viewer's side. On the wall is a low, below-the-line-of-vision in-sloping band of black vinyl-clad chain link fence for protection of both the animals and visitors.

The San Francisco Zoological Society provided the funds for the project. Contract was awarded for \$29,000.

Architects for the project were Corlett and Spackman.



SAN FRANCISCO ZOOLOGICAL GARDENS
RETAINING WALL AT DEER PADDOCK

STRYBING ARBORETUM AND BOTANICAL GARDENS
GOLDEN GATE PARK - PHASE II

The second phase development of the Strybing Arboretum and Botanical Gardens was completed July 8, 1966.

The area contains the original 12 acres set aside for a botanical garden by William Hammond Hall, first superintendent of Golden Gate Park. Since its inception no changes were made in Mr. Hall's plans. With the introduction of many new and rare plants the 12 acres were expanded to about 44 acres. It is this 44 acres that were re-designed by Robert J. Tetlow, Landscape Architect, to tie into the first phase development completed in May 1963.

Extensive grading had to be done to remove the old haul road on the hogsback that bisected the southern portion of the gardens and hid the redwood section from the rest of the Arboretum. Removal of this hogshead revealed the redwood trees from the Arboretum axis and invites you to enjoy this most interesting area.

A wood bridge now spans the lake in the old California section and adds interest to what was always a rather passive water scene.

The greatest problem, however, was the location of the path system. Grading had to be done for easier walking and vistas created to reveal interesting views and yet save and protect the many rare and old plants. Mr. Tetlow ably met this challenge as a visit to the Arboretum will show.



STRYBING ARBORETUM AND BOTANICAL GARDENS

JUDSON AVENUE WIDENING

The Judson Avenue Widening Project, which consists of widening the street between Phelan Avenue and Foerster Street and reducing the sidewalk width between Phelan Avenue and Edna Street, was divided into two contracts. The first contract, covering the street widening, was completed in May, 1964, as reported in the Annual Report for the fiscal year ending June 30, 1964. The second contract, covering the sidewalk cutback, was completed in April, 1966.

Under the second contract, the sidewalk width was reduced from 22.5' to 12' between Phelan Avenue and Foerster Street and from 22.5' to 15' between Foerster and Edna Streets. At the latter location, most of the driveways and entranceways on the north side of the street were constructed 4' to 5' above the street elevation while many of them on the south side of the street were constructed 4' to 5' below. A grade line satisfactory for all of them could not be provided without changing the official grade and the cross slope of the street. To minimize the damage to the driveways on both sides of the street, a roadway section with a maximum cross slope of 4% was selected.

All overhead utilities were removed and replaced with underground facilities in conjunction with the sidewalk cutback as a part of the undergrounding program.

The contract for the work was awarded to Kunz Paving Company of Burlingame, California for the amount of \$71,784.



VIEW FROM EDNA STREET AND JUDSON AVENUE LOOKING WESTERLY TO FOERSTER STREET, SHOWING WIDENING OF JUDSON AVENUE BETWEEN EDNA STREET AND FOERSTER STREET

FOURTEENTH STREET WIDENING

The project consists of narrowing the sidewalks of Fourteenth Street between Market Street and Alpine Terrace from 15' to 9'. Before the sidewalk cutback, Fourteenth Street was a two-way street with a curb-to-curb width of 34'. This was inadequate for the westbound traffic volume. By cutting the sidewalks 6' from each side of the street, an additional lane was provided to expedite the westbound movement.

At the request of the property owners fronting on the street, approximately 150 tree holes were constructed next to the curb.

The contract was awarded to Lowrie Paving Company, Inc., of San Francisco for the amount of \$295,000.



14TH STREET AFTER WIDENING NORTH SIDE TO TWO LANES WEST OF MARKET STREET. VIEW BETWEEN CASTRO STREET AND NEE STREET LOOKING NORTHEASTERLY

MARKET STREET AND CASTRO STREET CHANNELIZATION

The project consists of narrowing the sidewalk on the north side of Market Street in the vicinity of Castro Street by 3' to 6' and the sidewalk on the west side of Castro Street between Sixteenth and Market Streets by 6'.

The intersection of Market Street at Seventeenth and Castro Streets, a major signalized intersection, was inadequate for the afternoon peak hour traffic demand. Narrowing the sidewalk on Market Street provided the additional roadway width necessary for 4 - 10' traffic lanes on the north half of Market Street east of Castro Street and 3 - 10' traffic lanes west of Castro Street. Adding 6' to the roadway of Castro Street provided a turning lane for the right-turning traffic movement.

The contract was awarded to Baldwin Warren Company, Inc. of San Francisco for the amount of \$78,500.



VIEW FROM MARKET STREET AND CASTRO STREET LOOKING EASTERLY,
SHOWING STREET WIDENING AND RETAINING WALL RECONSTRUCTED ON
MARKET STREET

STREET INSPECTION UNIT

In response to a request from the Board of Supervisors this section prepared the necessary legislation to provide for the letting of a semi-annual contract for the construction, repair, and/or replacement of sidewalks where the responsibility of that maintenance or repair is that of the adjacent property owner.

The contractor receiving the award for this contract is then required to execute all work orders written by inspectors of this department calling for the repair of sidewalks fronting certain properties the owners of which have neglected or refused to repair their sidewalks after receipt of a written notice.

However, any property owner may sign a work order authorizing the city's contractor to complete sidewalk repairs or construction work.

In either case the City and County of San Francisco, in accordance with the Public Works Code, guarantees payment to the contractor for all repair work performed should the property owner fail to pay the contractor.

Through the medium of competitive bidding the above described service is available at the lowest unit bid prices to all property owners or agents who wish to avail themselves of this public contract.

STREET IMPROVEMENTS

Upon request by a majority of fronting property owners, the Street Improvement Section initiates assessment proceedings and prepares plans and specifications for the construction of previously unimproved streets.

Through numerous public meetings and hearings, the property owners are given opportunities to voice their comments or protests concerning their assessments or the design of the street.

Many of the remaining unimproved residential streets in the City present unique design problems due to the steep terrain or the improvements adjacent to the roadway which must be provided with vehicular access whenever possible.



O'FARRELL STREET WEST OF JONES STREET
BEFORE SIDEWALK REPAIR



O'FARRELL STREET WEST OF JONES STREET
AFTER SIDEWALK REPAIR

B E F O R E



A F T E R



IMPROVEMENT OF ILLINOIS STREET BETWEEN
23RD AND 25TH STREETS

Since this street in the outlying industrial area has been improved the land is undergoing rapid development with mutual benefit to the property owners and the City.

B E F O R E



A F T E R

IMPROVEMENT OF HAROLD AVENUE AND GETZ STREET
SOUTH OF GRAFTON AVENUE

Winding narrow roadways in a hilly area occasionally impassable in winter were replaced by city streets which afford year around access.



B E F O R E



A F T E R

IMPROVEMENT OF MINERVA AND SUMMIT STREET
BETWEEN PLYMOUTH AND MARGARET AVENUES

The homes on one side of this street are higher than the homes on the other side. The property was accommodated by the design of a split-level street with a plantable median strip.



B E F O R E

A F T E R



CRESTMONT DRIVE IMPROVEMENT

Opens to development a new area of Sutro Forest with homesites affording an expansive view of the City. The terraced retaining wall with planting areas is a departure from structures of past improvements.

PLAN AHEAD

The heading above is indicative of the work of the Traffic Planning Section. This Section under the direction of Norman Bray has the unenviable job of forecasting future traffic volumes and planning the development of facilities to serve this traffic in the heart of one of the fastest growing metropolitan areas in the country. In this connection, new street patterns in subdivisions and redevelopment areas and additions to the City's freeway and major street network are reviewed and checked for adequacy. Also covered are new off-street parking facilities, both privately developed and sponsored by the Parking Authority.

A major task faced by the Section is planning for the traffic changes that will be caused by the construction of the Bay Area Rapid Transit System. The project involves working with the City's Transit Task Force on such matters as traffic routing during subway construction and redesign of Market Street following this construction.

Another challenging task of the Section is the institution of temporary traffic control measures necessitated by construction projects of either public utility companies within the street area or of private contractors which require street space for the construction of large buildings. An example of this is the construction of the new 52-story Bank of America Headquarters building which required extensive traffic signal and traffic striping changes on three of our important downtown streets.

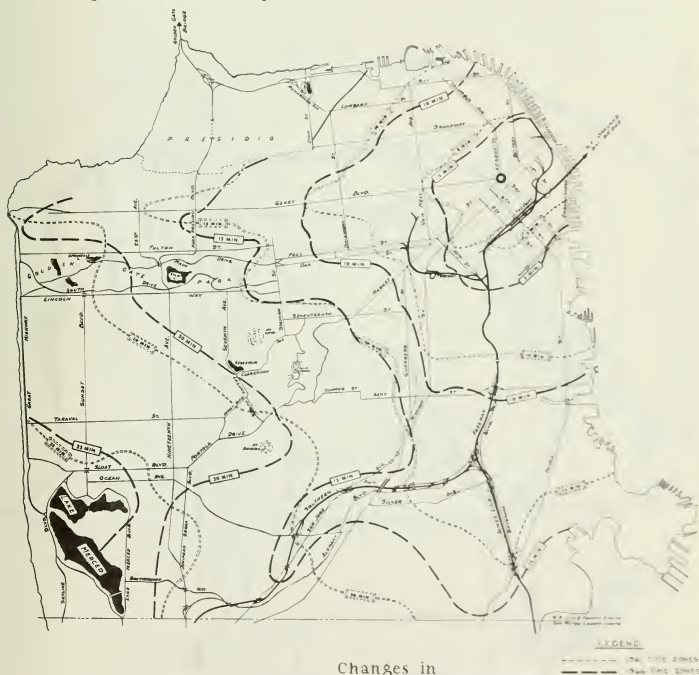


TRAFFIC ENGINEERING, STREETS
AND HIGHWAYS AND POLICE
DEPARTMENT REPRESENTATIVES
CHECKING ON STREET SPACE USE
ON A CONSTRUCTION PROJECT

MARKET STREET AT FOX PLAZA
SITE OF
FUTURE BART SUBWAY STATION

PEAK HOUR TRAVEL STUDIES

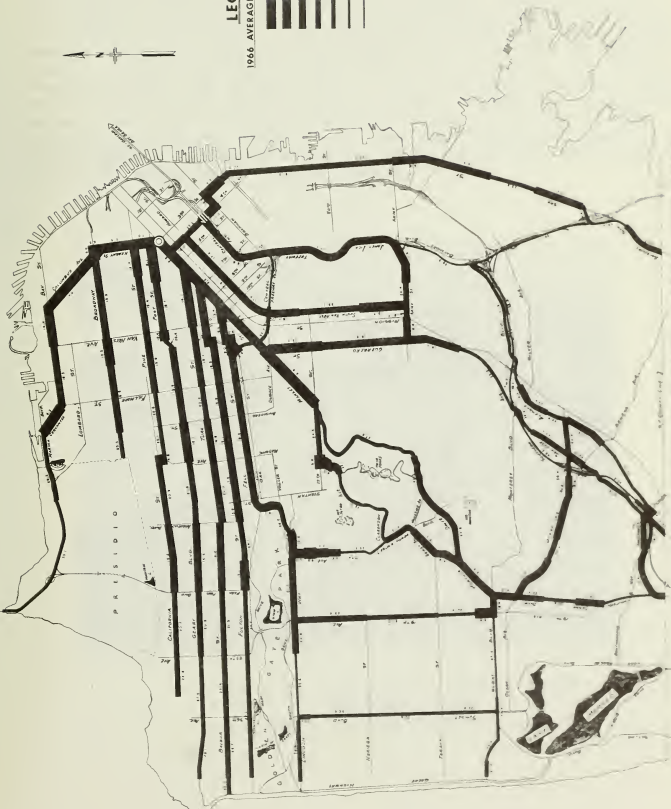
Another series of evening peak hour travel time studies was made in 1966. The focal point was Third and Market and the routes extended to most locations in the City. Despite increasing traffic volumes, traffic movement has held its own with minor decreases in travel time in some sections balanced by minor increases in others. An exception has been the corridor served by the Southern Freeway where for example the 15-minute time contour has moved westward from the vicinity of Alemany and Justin almost to the intersection of San Jose and Sickles Avenues. The worst spots in the City are the bottlenecks at 17th and Clayton and 19th and Sloat where speeds of 5 and 6 miles per hour prevail, and the higher speeds, as to be expected, are on parts of the Southern Freeway where speeds average about 50 miles an hour.



Changes in
P.M. PEAK HOUR TRAFFIC CONDITIONS
1961 AND 1966



LEGEND 1966 AVERAGE SPEEDS (M.P.H.)



P.M. PEAK HOUR DRIVING SPEEDS FOR 1966

OUTBOUND TRAVEL FROM STARTING POINT AT 3rd & MARKET Sts.

SAN JOSE AVENUE AND TINGLEY CHANNELIZATION

A winding roadway, high speeds and big dip in the roadway combined to make this location a spot where motorists lose control of their vehicles and leave the road. There were 17 accidents of this type in a 12-month period. Because of the freeway structures involved, rebuilding the roadway appears out of the question. An attempt has been made to alter the roadway environment with painting and signs in such a manner that the motorist will reduce his speed voluntarily. These restrict the width of the roadway and also flatten the curves. So far, it seems to be working. By realigning the curves, safe travel speeds were increased by 5 miles per hour for each direction of travel. Before studies showed that 73 per cent of the southbound vehicles and 30 per cent of the northbound vehicles were exceeding the safe speed for the curves. After the changes were made, 1 per cent of the southbound vehicles and none of the northbound vehicles exceeded the new safe speeds for the curve. Median speeds decreased by 14 per cent due to the tunneling effect of the painted channelization.



SAN JOSE AVENUE AND TINGLEY STREET
CHANNELIZATION
ACCIDENTS REDUCED BY USE OF PAINT

SEVENTH AND HARRISON STREETS

A few gallons of paint and some NO PARKING signs - these were the elements in reducing a very severe accident problem at the intersection of Seventh and Harrison Streets. There was an average of about 7 sideswipe accidents per year resulting from motorists going straight through on Harrison in the left turn only lane. The unfortunate motorist who made a legal left turn from the second lane was apt to get involved in a collision. On the spot examination showed that elimination of parking and shifting the LEFT TURN ONLY lane to the curb should cut down the violations. They certainly did. Sideswipe type of accident dropped from 7 to 1 in a 12-month period before and after.

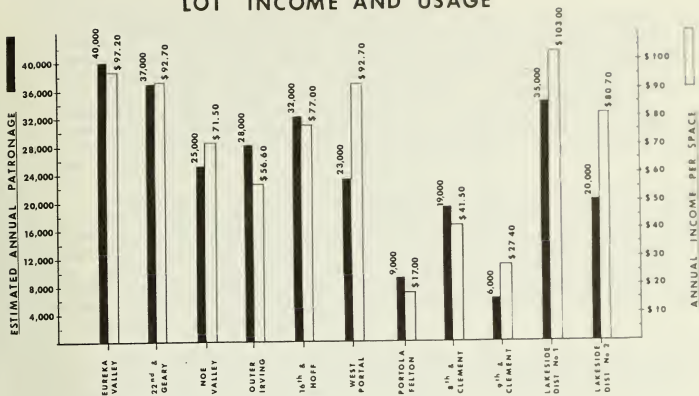


SEVENTH AND HARRISON STREETS
CHANNELIZATION BY PAINT BRUSH

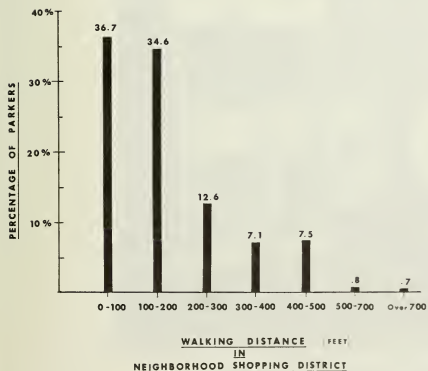
NEIGHBORHOOD SHOPPING DISTRICT PARKING PROGRAM

Eleven parking facilities with 296 stalls and costing \$1,038,000 are now in operation. The amount of illegal parking in peak periods has been reduced from 147 to 128 in the 11 areas. Also, there has been a certain amount of generated traffic, 20% of the total. The income and patronage of the lots vary widely. On the most successful end of the scale, the Lakeside No. 1 lot brings in \$103.00 per meter annually and has an estimated patronage of 35,000 parkers. On the other hand, the Portola-Felton lot receives only \$17.00 per meter annually and has an annual patronage of 9,000 parkers. As expected, most shoppers in neighborhood districts walked for only very short distances. Ninety per cent of the parkers walked less than 350 feet and the median walking distance is only about 125 feet. On the whole, the lots are proving quite successful both in serving the shoppers in neighborhood districts and helping to stabilize property values.

LOT INCOME AND USAGE



WALKING DISTANCE OF PARKING LOT PATRONS



LOTS SURVEYED

- West Portal
- Noe Valley (24th St.)
- Eureka Valley (Castro St.)
- Lakeshore (Ocean Ave - 2 Lots)
- 16th & Hoff
- Outer Irving (20th Ave.)
- Geary (22nd Ave.)

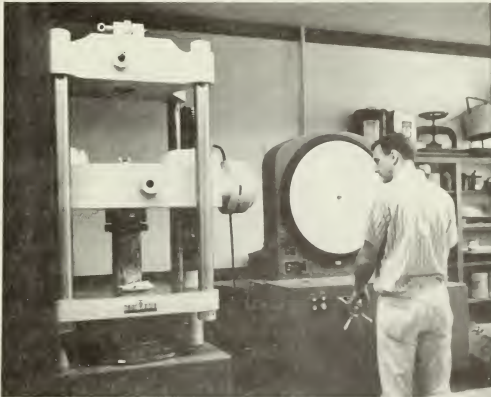
CONSTRUCTION

TESTING LABORATORY - The Testing Laboratory increased the scope and frequency of the services available to the Bureau of Engineering and other City agencies through the continual updating and improvement of testing equipment and through the addition of two employees to the staff. Improvements to the laboratory, designed to improve its efficiency and safety, have been deferred since the Board of Supervisors has requested a study on the advisability and feasibility of transferring the laboratory to a more suitable location.

Acquisition of a mobile laboratory has improved the effectiveness of quality control on Bureau of Engineering contracts through an increase in frequency of tests and a decrease in time required to give certain test results. A program of inspection and testing of materials has been re-instituted at asphalt plants, with concrete plants scheduled for inclusion next fiscal year. Other City agencies have increased their use of the services of the testing laboratory.

Work load has been increasing over the past several years. This should increase at an accelerated rate due to an anticipated increase in construction activity in the City of San Francisco.

INSPECTION - Construction activity declined during the latter half of the fiscal year. Projects of interest are the following:



MATERIALS TESTING LABORATORY
300,000 POUND TESTING MACHINE FOR TESTING CONCRETE AND STEEL
FOR QUALITY CONTROL OF CITY CONSTRUCTION PROJECTS



INTERIOR OF MOBILE TESTING
LABORATORY UNIT. THIS UNIT
IS USED ON THE JOB IN THE
FIELD FOR CLOSE CONTROL OF
SOILS COMPACTION AND PLANT
INSPECTION

MOBILE TESTING LABORATORY
AT CONSTRUCTION JOB SITE
TAKING IN PLACE DENSITIES
OF COMPACTED SOILS



GEARY PEDESTRIAN OVERPASS AT WEBSTER STREET

This project is a financial joint venture of the City and the developers of the Japanese Cultural and Commercial Center. The City agreed to construct an overpass designed by the architects and engineers of the Center provided that the developers paid for the additional construction costs over and above those for the usual pedestrian overpass.

This pedestrian overpass has attracted favorable attention due to its pleasing thin and arching silhouette. It is a post-tensioned cast-in-place concrete bridge supported on thin tapered piers. The main 85-ft. span consists of two cantilevered segments that are dowelled together at mid-span to form a paraboloid arch.

A further noteworthy feature is the post-tensioning method employed. The contractor employed a new patented method, called the V.S.L. method, which was developed in Switzerland and for which he holds the U. S. rights. The essential differences between this system and other post-tensioning systems are in the anchorage and in the method of grouting the conduits.

Although this contract is ahead of schedule and would have been completed except for circumstances beyond the control of the contractor, there were a number of problems encountered. The main ones were the following:



GEARY EXPRESSWAY PEDESTRIAN OVERPASS AT WEBSTER STREET

- 1) Construction of the Japanese Center Garage required redesign of the footings for the north ramp and north piers so that they would be supported by cast-in-place caissons that extend below the subgrade of the underground garage.
- 2) Work in the north area had to be coordinated with the garage builders, since there was an overlap in construction areas.
- 3) Although pleasing to the eye, the paraboloid arch shape of the main span and its curved soffit presented a formwork problem that one would expect boat hull builders to face.
- 4) The very thin cross-sections presented a challenge in placing the reinforcing steel, post-tension cables, electrical conduits, drain pipes and anchorages for the light posts and railing, leaving room for placing concrete and sufficient concrete cover.
- 5) Construction of the south segment was hampered by the variable deflections observed on the constructed north segment. This north segment had to be restrained during the placing and curing of the concrete in the south segment of the main span.
- 6) To protect the project from damage and to protect the public, the extreme north and south lanes on Geary Blvd. had to be closed to traffic due to impaired overhead clearance while the falsework was in place.

STOCKTON ST. TUNNEL REHABILITATION

This contract proposes to correct the seepage in the Stockton St. Tunnel which has been a never-ending maintenance problem. As a result of the seepages, this old tunnel has been dirty, unsightly and a nuisance to pedestrians using it.

The contract proposes to correct the seepage condition and improve the tunnel appearance by

- a) Chipping a drainage groove transversely across the full tunnel arch at selected locations;
- b) Drilling $1\frac{1}{2}$ " diameter holes through the tunnel lining at the drainage grooves to tap water pockets above and beside the tunnel;
- c) Attaching a U-shaped lead channel to the lining at the drainage grooves, to collect the water and lead it to drains in the sidewalk;



STOCKTON STREET TUNNEL BEFORE REHABILITATION

- d) Guniting the drainage grooves flush with the existing tunnel lining;
- e) Sandblasting the entire tunnel lining and plastering same with Thoroseal.

This project is about 75% complete, with the installed channels functioning as designed. Construction problems encountered were as follows:

- a) The tunnel lining on the west half of the tunnel is considerably thicker than what existing records show. This raised the possibility of having to require more funds to complete the project, which was not necessary.
- b) Since this is a major thoroughfare between the retail and theatre districts and the north side of the City, the tunnel could not be blocked to traffic at any time. This required the use of flagmen to direct traffic through the tunnel.
- c) The prevailing air flow from the north caused complaints during sandblasting. This has been minimized by doing the sandblasting at night.



STOCKTON STREET TUNNEL AFTER REHABILITATION

RELOCATION OF NORTH POINT MAIN SEWER

The North Point Main Sewer, which is the major trunk sewer serving the North Point Sewage Treatment Plant, is being relocated in an easterly direction at the Market St. crossing. This is the first of a series of sewer relocation contracts that will be required to construct the BARTD rapid transit system in San Francisco. Cost of these relocations will be paid by BARTD.

This project started in April 1966. Features of interest are the following:

- a) The relocated sewer will span Market St. as an underground pre-stressed bridge supported on a center and two abutment piers;
- b) To protect the piers from possible undermining during construction of the Market St. subway, these piers will be supported by piles driven to a minimum pile tip elevation below the subgrade of the proposed subway;
- c) The heavy week-day streetcar and bus traffic on Market St. will not be interrupted during construction;
- d) Contrary to standard practice in City contracts, this contract provides for paying the contractor for supporting all underground utilities.

NORTH POINT COLLECTING SEWER -SECTION D-9

FOURTH STREET SOUTH PUMPING STATION

The Fourth Street South Pumping Station, which was completed in July 1966, is unique in that for the first time a prefabricated underground pumping station was specified in a Department of Public Works Contract for use in the City's sewerage system.

The outstanding features of this new type of design are: Delivery of the station as a package to the site ready for installation in the excavated area. Installation time is significantly lower than for a conventional pumping station of the same capacity. The pump installation, plumbing, wiring and painting are all done at the factory, thus eliminating installation, fittings and adjustments in the field effecting considerable savings in time and money.

Completion of this station represents the collection of one of the City's two remaining raw sewage discharges. Raw sewage which previously discharged into the Channel Street Waterway, will be pumped through two submerged rubber hose force mains which cross the waterway, and will discharge into the influent system of the Fourth Street Pumping Station on the north side of Channel Street Waterway.

The station consists of a welded steel cylinder with access hatch extending to street level. The cylinder is placed vertically in the ground.

Operation of the pumps is automatic with the pumps controlled by a bubbtrol electro-pneumatic sensing unit; seal water pump operation is automatically tied in with the sewage pump starters.

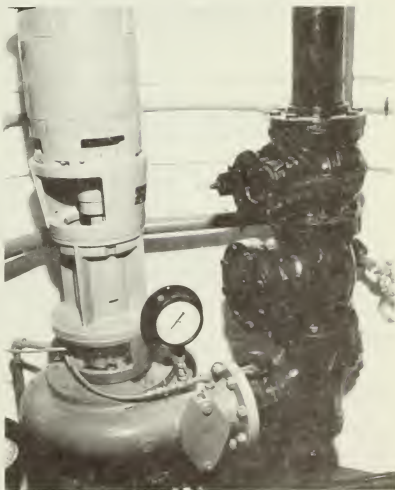
Safety features, such as automatic ventilation, dehumidifier, sump pumps, and automatic alarm and emergency shutdown are all part of the packaged system.

The interior of the pump chamber is epoxy coated and has a non-skid floor for safety and easy maintenance.

The unit is extremely compact yet leaves room for maintenance work as required.



FOURTH STREET PUMPING STATION
SOUTH OF CHANNEL
ENTRANCE HATCH



FOURTH STREET PUMPING STATION
SOUTH OF CHANNEL
PUMP, MOTOR AND DISCHARGE
PIPING

STREET LIGHTING IMPROVEMENT IN OVERHEAD DISTRICTS

The improvement of the street lighting on streets having overhead wiring was about 98% complete on June 30, 1966. A total of 17,863 new street lights was installed by the Pacific Gas and Electric Company at locations designated by the Department of Public Works and approved by the Public Utilities Commission.

Since the work covers about 85% of the City's street mileage, it was a matter of great curiosity to determine the effect of the improvement. The first of the new lights was installed in December of 1963. The correlation with crime statistics is shown in Table I.

TABLE I

Year	New Lights in Service	Total Day	Crimes Night	Ratio Night/Day
1962	0	1120	2830	2.53
1963	1	1219	3091	2.54
1964	6300	1613	3609	2.25
1965	17,336	1763	3348	1.88

Although the statistics indicate a reduction in the ratio of night to day crimes despite an overall increase in total crimes, it is too early to form conclusions. Many factors including the Police Department, Board of Education and other agencies are working at crime reduction.

STREET LIGHTING BOND ISSUE

Work has been proceeding on the improvement of street lighting on those streets having underground electrical distribution covered by the 1964 Bond Issue.

At the end of the fiscal year, work under ten contracts amounting to 636 street lights had been completed.

An important part of the program is the replacement of deteriorated poles. Photo illustrates the condition of the steel standards on Clipper Street that justified their replacement. The new type standards are shown as installed in the Diamond Heights Area.



DETERIORATED POLE
CLIPPER STREET
DIAMOND HEIGHTS AREA



NEW TYPE STANDARD
DIAMOND HEIGHTS AREA

INTERDEPARTMENTAL COMMITTEE ON WATER POLLUTION CONTROL

The Interdepartmental Committee on Water Pollution Control, which consists of the Department Heads of Public Works, Public Health, City Planning, Recreation and Park and Public Utilities, with the Director of Public Works as Chairman, was formed by Board of Supervisors Ordinance No. 137-65 passed on June 1, 1965.

The purpose of this committee is to coordinate the viewpoints of all city departments; act as a liaison agency with the Board of Supervisors and outside agencies, and formulate and recommend policy to the Board of Supervisors on matters concerning water pollution or its effect on shoreline development.

Shortly after its formulation, this committee prepared a report and proposed resolution which established policy relative to the protection and beneficial use of San Francisco Bay and its contiguous shoreline within the limits of the City and County of San Francisco East of the Golden Gate Bridge. This report and resolution was adopted by the Board of Supervisors on September 7, 1965.

The most significant achievement of this committee this past year was the preparation and presentation of a report entitled "Report to Board of Supervisors on Water Pollution Control Problems Within the City and County of San Francisco". The purpose of this report which was presented before the Health Committee of the Board of Supervisors on June 28, 1966 was to:

- 1) Make the Health Committee knowledgeable of the City's sewerage system and water pollution problems; and
- 2) Present three tentative Regional Water Quality Control Board resolutions relating to long range plan and policy for the protection of the bay and ocean along with an analysis of each and a recommended course of action to be taken by the Board of Supervisors.

SEWERS AFFECTED BY PROPOSED BARTD CONSTRUCTION

The proposed construction of the Bay Area Rapid Transit System in San Francisco presents in certain areas an impenetrable wall to our gravity sewer system.

It will be necessary not only to replace sewers displaced by rapid transit structures, but also to work upstream of these interferences to reconnect the severed portions of the affected systems to adjacent systems which are or can be made adequate to handle the revised flow patterns.

The plans and specifications for the sewer work are prepared by the City for inclusion in BARTD contracts where this is convenient, or prior to BARTD needs as a City contract. In either case, of course, the cost of such work including engineering and inspection costs is borne by the District as provided for in a master agreement between the City and BARTD.

It is our desire and policy to modify the sewer system only where necessary to provide an adequate sewerage system without additional public or private pumping systems. Some additional private pumping may result wherever it can be demonstrated that it would be beneficial to the property owners and they so elect.

The first project in this program was the awarding of a contract for a 7'-6" by 8'-3" reinforced concrete box sewer in Second, Stevenson, Ecker, Market and Sansome Streets to replace an existing 8'-6" diameter sewer which would conflict with the Montgomery Street Station. There were several interesting features in the design of this sewer. The portion of the sewer crossing Market Street was designed as a prestressed concrete two-span continuous girder to bridge the two transit tunnels, to support the superimposed loads of traffic and the 9 to 12 feet of earth above the sewer, and to allow for the rapid transit tubes to be constructed as tunnel or as open cut. The spans are 69'8" between centerlines of the three pile caps supported by clusters of H-piles. Since this will be the only portion of the sewer on piles, approach structures at each end were designed to span 30 feet so as to minimize the effects of differential settlement.

Flow in the sewer must be maintained, as it is the main trunk sewer for the drainage district. Making connections to the sewer will present a challenge to the Contractor.

Construction is being done in stages to maintain maximum access to private property in Stevenson Street and to reduce traffic congestion. Construction should be completed early in 1967.

Another major project in the program involved the awarding of a City contract for construction of a 66" diameter reinforced concrete pipe sewer crossing the rapid transit right-of-way and the State freeway at Santa Rosa Avenue. The 200 feet of pipe jacking required to eliminate traffic interference will be the largest installation of this kind for a city sewer, exceeding the previous installation of 60 feet of 42" pipe at 19th Avenue and Eucalyptus Drive.

Because of the high sewage velocities resulting from steep slopes, vitrified clay tile is to be installed in the pipe invert to prevent invert erosion. BARTD requested that the remainder of the pipe be protected with an epoxy tar coating to prevent deterioration and possible collapse of the sewer, which passes under the transit structure. This contract, awarded by the City is scheduled for completion early in 1967.

In addition to these projects, design continues for the remaining work for BARTD, which occupies a considerable portion of our sewer design effort; this work must be coordinated with BARTD Schedules to avoid delay to this huge project.

A significant project not related to rapid transit, the Cayuga Avenue Auxiliary Sewer, Section III, consists of 1/3 mile 6'-6" x 9'-6" and 6'-6" x 7'-6" monolithic reinforced concrete box sewer, which when completed, along with three other Sections, should eliminate the serious flooding which has occurred in the past in this area. This project is scheduled for completion in the fall of 1966

RICHMOND SUNSET SEWAGE TREATMENT PLANT - MODIFICATIONS TO SEDIMENTATION, CHLORINATION AND SEWERAGE FACILITIES

A contract was awarded to Baldwin Warren Co. Inc. on April 9, 1965 in the amount of \$746,760 for the modifications to the sedimentation, chlorination and sewerage facilities at the Richmond Sunset Sewage Treatment Plant.

This contract consisted of the construction of a new reinforced concrete sedimentation tank complete with canopy, and mechanical and electrical equipment; the modification of the four existing sedimentation tanks; the furnishing and installation of new chlorination facilities; and the construction of new influent and effluent channels.

A noteworthy addition to this treatment plant is the incorporation of a residual control meter as part of the chlorination facilities. This unit will insure the proper feed of disinfectant to the effluent and thereby aid in providing more efficient and economical use of chlorine.

Completion of this contract is the second phase of the enlargement program to properly equip the plant for primary treatment of all sewage from the Richmond Sunset area to the year 1980.

The third and last phase of this program, which consists of alterations and improvements to the existing headworks building, is currently in the preliminary design stage.

DIVISION OF SURVEYS AND MAPPING

SUBDIVISIONS AND STREET CHANGES

TABLE 1-A

SUBDIVISION MAPS

Development of land in San Francisco, because very few large areas in the county remain unimproved, is shifting to condominium subdivisions and small tracts, the latter often by Parcel Maps and Record of Survey maps. Maps processed relating to subdivisions follows:

Tentative Subdivision Maps examined and approved:

Nibbi Court
University Mound Tract and Reis Tract Blocks 121 and 32 respectively

Final Subdivision Maps examined, approved and recorded:

Map of Japanese Cultural Center
Red Rock Hill Unit Two

Parcel Maps examined and approved:

Diamond Heights Unit No. 3 - Block 7544
Mission Block 121
St. Mary's Park - Blocks 5840 and 5841
Assessors Block 6298

Parcel Maps examined, approved and recorded:

Portion of Block Q Railroad Homestead Association
Portion of Block 7529
Portions of Blocks 7528 and 7523
Portions of Western Addition Block 511
Gold Mine Hill Homes Unit No. 1
Portion of Sunset Block 1143

Record of Survey Maps examined and recorded:

Assessors Lot 14 Block 6651
Portions of Blocks 57 and 58 of the Paul Tract
Portion of Outside Land Block 213
Portion of Block Z Railroad Homestead Association
Portion of Block 26 West End Map No. 1
Japanese Cultural Center Garage
Portions Lots 97 and 98 West and Homestead Assoc.
Portion of Block Q, Railroad Homestead Assoc.
Portion of Block 1480 of the Map of Vista Del Mar
Portion of Western Addition Block 571

SUBDIVISIONS AND STREET CHANGES

TABLE 1-A (CONT.)

STREET DEDICATION MAPS APPROVED AND RECORDED

Extension of Persia Avenue between Dublin Street and John McLaren Park
Opening of Visitation Avenue adjacent to John McLaren Park
Extension of Brazil Avenue between La Grande Avenue and John McLaren Park
Widening and Extension of Geneva Avenue between Alemany Blvd. and Southern Freeway Right of Way
Amended Map showing the Widening of Mansell Street from University Street to San Bruno Avenue
Extension of Brotherhood Way easterly of Bright Street
Widening of a portion of Summit Street at Thrift Street
Widening of a portion of Summit Street at Minerva Street
Opening and Widening of Streets and Avenues in area of San Francisco Wholesale Produce Market
Widening of Bryant Street northeasterly of 20th Street
Widening of the intersection of Lobos Street and Caine Avenue

STREET VACATIONS APPROVED

Portions of Rankin Street, Galvez and Hudson Avenues
Homestead Street - South of 25th Street
Holyoke Street - North of Dwight Street
Detroit Street - Joost Avenue to Monterey Boulevard
Getz Street - At Harold Avenue
Melrose Avenue - Verna Street to Edna Street
Somerset Street - Southerly of Campbell Avenue
Castro Street - 28th Street to Duncan Street
Bancroft Avenue - Southeasterly of Ingalls Street
Moraga Street - 19th Avenue to 20th Avenue
Maggie Alley - Easterly of Jones Street
Minnesota Street - 22nd Street to 23rd Street
Somerset Street - Northwesterly of Dwight Street

CHANGES IN OFFICIAL WIDTHS OF SIDEWALKS

Ripley and Fillmore Streets
Judson Avenue - Hazelwood Avenue to Detroit Street
Beach Street - Leavenworth Street to 232.5 feet westerly
Townsend Street - Eighth Street to Division Street
Stanyan Street - Fell Street to 125 feet northerly
27th Street - Castro Street to 430 feet easterly
North Point Street - Mason Street to Powell Street
Mason Street - North Point Street to 36 feet northerly

SUBDIVISIONS AND STREET CHANGES

TABLE 1-A (CONT.)

CHANGES IN OFFICIAL GRADES

Dwight Street - Goettingen Street to Hamilton Street
 Holyoke Street - Woolsey Street to 233 feet southerly
 Somerset Street - Woolsey Street to 274 feet southerly
 Judson Avenue - Phelan Avenue to Edna Street
 27th Street - Noe Street to Castro Street
 23rd Street - Iowa Street to 3rd Street
 Tennessee Street - 23rd Street to 370 feet northerly
 Indiana Street - 22nd Street to 23rd Street
 Minnesota Street - 23rd Street to 25th Street

FIELD SURVEYS

TABLE 1-B

NUMBER OF SURVEYS

A total of 201 field surveys, undertaken and completed by the six survey parties of the Division's Field Engineering Section, comprised the following:

Public Improvement Surveys for:

Public Assessments and Private Contracts.....	42
Contracts Financed by City	150

Site and Lot Location and Topographic Surveys for:

Bureau of Architecture	8
Recreation and Park Department	1
S. F. Port Authority	-
City Attorney	-

Survey fees received by the City for Public Assessment and Private Contracts totaled \$15,575.

EXTENT OF SURVEYS

The aggregate length of field surveys completed totaled 82.28 miles, in addition to which 24.38 acres of topographic surveys were completed. The aggregate length, which was the sum of the various construction project lengths except where not applicable, comprised the following:

Cross sections for street, structure, sewer, and drainage design	4.40 Miles
Line and grade for construction of:	
Sewer and drainage systems.....	2.75 Miles
Street Grading	1.10 Miles
Pavements and curbs	2.42 Miles

Line, grade and cross sections for reconstruction of existing:

Pavements	1.88 Miles
Pavements including track removal	-
Curbs and gutters	-
Subsidence Areas	2.22 Miles
Slide Areas	1.26 Miles

Block, Site and Lot:

Surveys (boundary lengths)	0.49 Miles
Resurveys (frontage lengths)	-
Reference marks (frontage lengths)	0.43 Miles
Monument lines checked	53.22 Miles
Grade Studies	0.05 Miles
Miscellaneous surveys (not included above)	6.99 Miles

Post-Construction examination of:

Street Grading	1.29 Miles
Sewer and drainage systems	2.27 Miles
Pavement and curbs	1.51 Miles

MONUMENTS

In addition to the aforementioned checking of existing monument lines, 220 survey monuments were set or reset, and referenced, and 65 monuments examined for repair and, if necessary, repaired.

PRECISE LEVEL SURVEYS

Precise level bench marks established, and elevations redetermined on existing bench marks totaled 850 required the running approximately 87.9 miles of precise levels in addition to the aforementioned survey mileage.

DIVISION OF SURVEYS AND MAPPING
MISCELLANEOUS SURVEYS AND STUDIES
TABLE 1-C

SURVEY PLATS PREPARED

District Health Center No. 2	Boundary and Topographic Survey
Walter Haas Playground	" " " "
Excelsior Branch Library	" " " "
George Christopher Playground	" " " "
San Francisco City College Area A	Boundary Survey
" " " " Area B	" " "
Southwest High School Project	Boundary and Topographic Survey
Fire Dept. Engine No. 7	" " " "
Visitation Valley Jr. High School	" " " "
Diamond Heights Sr. " "	" " " "
Potrero Hill Jr. " "	" " " "
Starr King Annex School	" " " "
Paul Revere School	" " " "
El Dorado Elementary School	" " " "
Burnett " "	" " " "
Gilman Playground Site	" " " "
Paul Revere School Addition	" " " "
Brett Harte School Addition	" " " "
District Health Center No. 3	" " " "
District Health Center -	
Richmond - Sunset	" " " "

OTHER MISCELLANEOUS STUDIES

More than sixty (60) miscellaneous drawings were prepared in connection with property acquisitions and dispositions; street openings, widenings, and vacations; and easement acquisitions and abandonments.

More than twenty (20) reports regarding City interest in actions to quiet title were made to the City Attorney's office. One hundred ten (110) descriptions for deeds to and from the City, involving the Department of Public Works, were checked. Ten (10) appeals from decisions of the City Planning Commission were checked to determine whether the signatures thereon represented at least 20% of the property owners within a radius of 300 feet of the property involved, so as to qualify the appeals for consideration by the Board of Supervisors.

SUPERVISORY PERSONNEL
AS OF JUNE 30, 1966

C. J. Geertz, City Engineer
R. T. Shoaf, Ass't. City Engineer

DIVISION AND SECTION	PERSON IN CHARGE
STREETS AND HIGHWAYS	W. Scruggs, Senior Engineer
Street Improvement Section	H. G. Louie, Engineer
Highway Section	L. T. Tom, Engineer
Street Reconstruction Section	L. T. Tom, Engineer
DESIGN	G. Galli, Principal Engineer
Structural Section	G. Jeong, Senior Engineer
Sewer Section	B. S. Martin, Senior Engineer
Sanitary and Special Projects Section	A. O. Friedland, Senior Engineer
Mechanical Section	W. F. Eisenberg, Senior Engineer
Electrical Section	A. E. Tanner, Senior Engineer
Contract Preparation Section	C. T. Beggs, Engineer
Standards, Utilities and Estimates Section	J. J. Walsh, Jr., Engineer
Administrative Section	E. J. Sierra, Admin. Engineer
RECREATION AND PARK ENGINEERING	D. Martin, Senior Engineer
Office Engineering	W. Person, Engineer
Field Engineering	C. J. Lynch, Survey Party Chief
SURVEYS AND MAPPING	S. C. Gerughty, Senior Engineer
Administrative and Records Section	J. H. McLean, Ass't. Engineer
Office Engineering Section	G. Q. Woo, Engineer
Field Surveys Section	W. E. Bryan, Chief Surveyor
CONSTRUCTION	W. C. Ewing, Senior Engineer
Inspection Section	T. J. Ford, Engineer
Testing Section	E. F. Nylander, Sr. Const. Insp.
TRAFFIC ENGINEERING	W. Marconi, Senior Traffic Engr.
Legislative Section	C. M. Lang, Ass't. Engineer
Design Section	R. Evans, Acting Ass't. Engineer
Planning Section	N. Bray, Ass't. Engineer
Operations Section	G. Hansen, Ass't. Engineer
Downtown Parking Survey	G. L. Costanzo, Assoc. Engineer
CONTRACT ADMINISTRATION	F. Giusto, Admin. Engineer
LIAISON ENGINEER	H. H. Beneke, Assoc. Engineer
OFFICE MANAGEMENT	F. R. Nichols, Head Clerk

PERSONNEL AT BEGINNING AND END OF FISCAL YEAR:

DIVISION	JULY 1, 1965	JUNE 30, 1966	CHANGE
ADMINISTRATION	8	8	
STREETS AND HIGHWAYS	39	40	+1
RECREATION AND PARK ENGINEERING	14	16	+2
DESIGN	99	102	+3
SURVEYS AND MAPPING	38	37	-1
CONSTRUCTION	25	31	+6
TRAFFIC ENGINEERING	28	26	-2
OFFICE MANAGEMENT	15	14	-1
TOTAL	266	274	+8

(1) Employees in Professional Classifications		115
Employees in Sub-Professional	"	127
Employees in Clerical	"	32
TOTAL		274

PAYROLL:

The following tabulation shows the number of employees and total payroll charged to General, Project and Road Funds:

SOURCE OF PAYROLL FUNDS	EMPLOYEES 1965-66	PAYROLL 1965-66
General Fund		
Budget Payroll	72	782,155.51
Project Funds (Gas Tax, Bond, General, Etc.)	176	1,575,080.51
Road Fund - Traffic Engineering	26	252,977.94
	274	

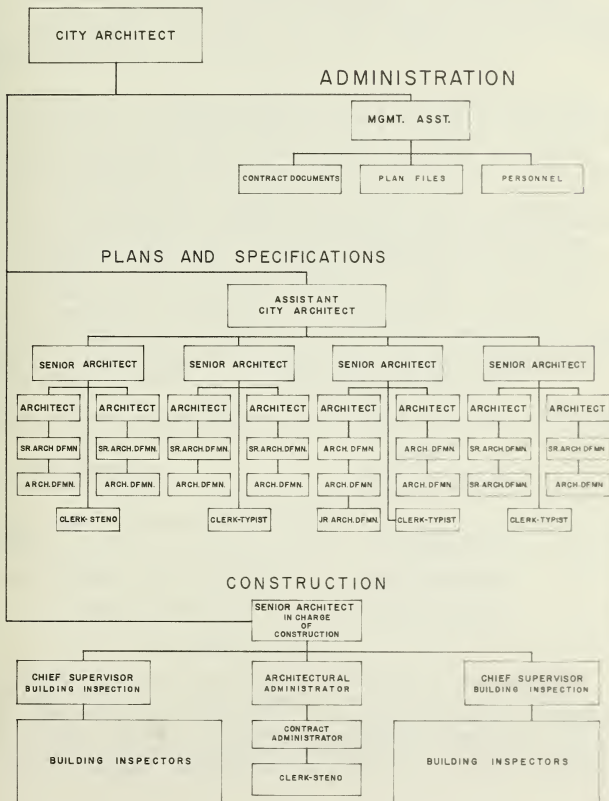
RETIREMENTS

During the past year the following employees were retired and recognition is given for their faithful service to the organization:

Raymond W. Harriman	7-27-65	Instrument Man	20 years
Robert R. Lauenstein	8-1-65	Administrative Engineer	25 years
George F. Rotenkolber	11-1-65	Junior Civil Engineer	2 years
John D. Roberts	11-16-65	Senior Construc- tion Engineer	21 years
Richard E. Gordon	12-1-65	Junior Civil Engineer	24 years
Mark Munson	1-22-66	Junior Civil Engineer	17 years

BUREAU OF ARCHITECTURE DEPARTMENT OF PUBLIC WORKS ORGANIZATION CHART

JULY 1 1966



BUREAU OF ARCHITECTURE

Charles W. Griffith, City Architect

The Bureau of Architecture has the responsibility for design and construction of new City buildings, and the modernization, remodeling, and such maintenance projects on existing City buildings as may require plans and specifications, or which exceed \$5,000 in cost. The activities of the Bureau are divided generally into two separate functions: (1) the preparation of drawings and specifications, and estimates and (2) the supervision of construction,

Once the need for a building project or major remodeling of an existing building is established, the Bureau assists the requesting Department in the preparation of a basic program and the acquisition of a building site. The program consists of general information relative to the functions to be performed in the building, the number and type of employees who will be housed in the building, the public to be served, and related data. The Bureau then prepares preliminary drawings, specifications, and estimates of cost, and when funds are available, prepares, or supervises the preparation of the final drawings, specifications, and estimates. The bid forms are then prepared, and bids are requested by advertisement in the official newspaper. After bids are received and analyzed, recommendations are prepared for award of contract, the contract is awarded and certified, Bureau personnel inspect the work under progress certifying its completion in conformance with the contract, together with progress payment each month and final payment upon the completion of the job.

The amount of work in the Bureau as of July 1, 1965 was as follows:

	Amount
1. (4) Bond Issues in preliminary stage	\$71,324,500.00
2. Budget work in preliminary stage	2,465,444.00
3. Projects under construction	<u>14,160,000.00</u>
Total Work Load	\$87,949,944.00

ORGANIZATION

The Organization Chart indicates in brief manner the breakdown of divisions which have been found to be efficient in processing the Bureau's work. The organization of the Bureau is broken down into three separate divisions: Administration, Plans and Specifications, and Construction. The responsibilities of these divisions are further defined as follows:

ADMINISTRATION DIVISION

Section I Personnel

This section is responsible for personnel matters, all incoming and outgoing correspondence, answering various questions of the architects, contractors, and public, and for staffing the Bureau's main counter.

Section II Plan Files

This section is responsible for requisitions and procurement of blueprints, assembly of blueprints, specifications and bid forms, the filing of tracings, blueprints and specifications, and related work.

Section III Contract Documents

This section is responsible for the assembly, checking, and issuance of the contract documents to contractors who prepare bids for the various jobs.

PLANS AND SPECIFICATIONS DIVISION

The responsibility for processing the various jobs from initial inception to completion of the final drawings, specifications and estimates is divided into four sections. Each of these sections is headed by a Senior Architect who not only maintains formal and informal relationships with the client agency but also supervises the personnel assigned to him for the preparation of the drawings and specifications.

CONSTRUCTION DIVISION

This Division supervises and inspects all work under construction. The responsibilities of the Construction Division include progress and validity of the contract work, contract payments, and certification of completion of the contract. The amount of the contracts under construction is \$14,160,000.00.

The Construction Division is headed by a senior architect, and there are two chief building inspectors supervising the building inspectors who are assigned directly to the construction jobs.

I 1959 Palace of Fine Arts Bond Issue	\$1,800,000
(Total Cost \$7,734,440)	

This building was built for the 1915 Pan Pacific Exposition Fair at a cost of \$632,000. It is the only building not demolished after the fair. Due to the temporary nature of its construction, it gradually deteriorated.



PALACE OF FINE ARTS
ENTABLATURE
NORTH COLONNADE
WITH WEEPING LADY



PALACE OF FINE ARTS
SOUTH COLONNADE AND
ROTUNDA

In 1957 the State offered \$2,000,000 toward the permanent rehabilitation of the Palace, provided matching funds were provided from other sources. In 1958 a bond issue of \$3,600,000 failed to receive the required 2/3 majority. Mr. Walter Johnson then gave the City \$2,000,000 providing the matching funds, and in November 1959, a bond issue of \$1,800,000 was approved. This was a Recreation-Park bond issue and, while the cost data available to that department indicated that the \$5,800,000 then available was adequate, no detailed estimate had been prepared to that date. The project was referred to the Department of Public Works as soon as property was cleared in February of 1961. Preliminary plans and specifications were prepared and the preliminary estimate for all work contemplated by the Bond Issue was \$12,800,000. In order to fit the job within the budget, the construction was revised to colored poured concrete, and the end pylons were omitted. Bids received, November 20, 1963, exceeded the funds available by \$1,600,000, of which Mr. Johnson and the Palace of Fine Arts League provided \$750,000, and \$850,000 was provided in the 1964-65 Budget. Work started on July 16, 1964, is progressing favorably, and will be completed in August 1967.

II 1960 deYoung Museum Bond Issue

\$2,725,000

This bond issue for an Asian Wing of the deYoung Museum was approved in June 1960 to provide a proper facility for the housing, security, and display of the Brundage Collection of Oriental Art objects. The Collection has been valued at \$30,000,000, and is still growing.

The project was in design stage in July 1964. Construction was started in August 1964, successfully completed on April 25, 1966, and, after careful study, appropriate selections of art objects from the Collection were placed on display. The grand opening of the Asian Wing of the deYoung Museum, which was preceded by a formal dedicatory ceremony, attended by Ambassadors of the Far Eastern countries, the Governor, represented by his wife, the Mayor, Mr. Brundage, and many other dignitaries, was on June 11, 1966, approximately one month ahead of the original schedule.

III 1964 School Bond Issue

\$31,464,500

The 1964 School Bond Issue, which will provide for a number of needs of the School Department including four entirely new schools, major additions to two schools, two new buildings for City College, replacement of four elementary schools, replacement of temporary classrooms with permanent construction, and various rehabilitation and modernization, is progressing satisfactorily, as follows:

Under Construction

Diamond Heights Elementary School

(10) Modernization & Rehabilitation Projects



PAUL REVERE
SCHOOL ANNEX



TREASURE ISLAND
ELEMENTARY SCHOOL

Drawings Completed (State checks underway)

City College Educational Services Building

Final Drawings Under Preparation

City College Laboratory Building

Paul Revere Elementary School

(5) Modernization & Rehabilitation Projects

Preliminary Drawing Stage

Diamond Heights Senior High School

Potrero Junior High School

Visitation Valley Junior High School

Starr King Elementary School

Burnett Elementary School

Bret Harte Elementary School

Eldorado School Addition

Replacement of Temporary Classrooms

(20) Modernization & Rehabilitation Projects

Temporarily Delayed

Grattan Elementary School

Cabrillo Elementary School

In addition to the bond work, and the usual rehabilitation work, reconditioning and maintenance work normally completed for the school district, the Bureau is also processing a new elementary school for Treasure Island which is practically all Federal financing. The estimate for this new elementary school is \$463,000 Phase I, and approximately \$1,000,000 for the entire school.

IV 1964 Fire Department Bond Issue

\$4,890,000

The 1964 Fire Department Bond Issue work is progressing favorably as follows:

Under Construction

Headquarters Building

Firehouse for Engine Company No. 28

Drawings Completed

Firehouse for Engine Company No. 7

Working Drawing Stage

Firehouses for

1. Engine Company No. 2
2. Engine Company No. 3
3. Engine Company No. 16
4. Engine Company No. 17
5. Engine Company No. 18
6. Rehabilitation (Various Firehouses)

The Board of Supervisors approved \$20,000 for a competition for new firehouses for Engine Companies 33, 37, 36, and 43 in May 1965. This competition is being conducted to determine the appearance of these firehouses. The Commission has determined that the Firehouse for Engine Company No. 8 should be added to this list.

V 1964 Log Cabin Ranch School Bond Issue \$1,300,000

This bond issue which is to provide a new Juvenile Ranch School, for boys 10 to 15 years old, is now entering the construction stage. The road and site work are under construction and bids are being received for the major project, the construction of the four type III buildings of the school together with yard development and landscaping and water supply and sewage disposal system. It is expected that the project will be ready on or around the scheduled occupancy date, July 1967.

VI San Francisco Medical Center \$33,670,000

As a result of an exhaustive study by the Health Department, the Medical Advisory Board, the Hospital Planning Committee, the Hospital Consultant, and the Bureau of Architecture, a bond issue for a new Medical Center was developed and was approved by the electorate in the Fall election of 1965. The estimate for the Medical Center, which will provide 780 new hospital beds, is as follows:

1. Hospital Building Construction (690 sq. ft. @ \$35.00)	\$24,150,000
2. Artistic Enhancement (1% of Project Cost)	330,000
3. Consultant & Architect's fees	1,970,000
4. Equipment (Groups 2 and 3)	2,000,000
5. Supervision and Inspection	240,000
6. Construction Contingency	1,000,000
7. Site Work and Related Items	480,000
8. Inflation 3 yrs @ 4% = 12%	<u>3,500,000</u>
Total	\$33,670,000

The preliminary architectural work for this project is progressing favorably. The architects have been engaged, the Hospital Consultant has been arranged, and two meetings a week are being held to clarify all requirements. It is expected that 80 months will be required from initiation of the design procedures to completion and occupancy of the new Medical Center, and that the facility will begin operating early in 1972.

In addition to the bond work, extensive remodeling to the X-Ray and Surgery Sections were underway at the San Francisco General Hospital and the new Pathology Building, which included Federal funds, was completed.

PROPOSED BOND ISSUES

Various Bond Issue proposals were under consideration and data will most probably be developed on them within the next two years, as follows:

1. Courts Building - Remodel City Hall for Office Use

This bond issue is being re-studied during this coming year with \$35,000 provided in the 1966-67 budget. It was last presented in 1958 in amount of \$22,150,000. It possibly will be re-cast to provide for a new office building, remodeling City Hall for the Courts.

2. New Public Library - (or Remodel Existing Public Library)

The cost of either of two alternatives is estimated at \$12,000,000. The present library is not a proper facility to serve the modern-day need for library services.

3. Recreation-Park Bond Issue in the amount of \$20,000,000 was defeated in 1964. The needs of this Department are well-known and a bond issue in total amount of 30 to 35 million will develop within the next few years.

4. Other Bond Issues Under Consideration are:

- a. Palace of Legion of Honor
- b. Convention Facilities
- c. Sports Center
- d. Further development of deYoung Museum
- e. Youth Guidance Center
- f. Social Services
- g. Musical Arts Building

MISCELLANEOUS BUDGET WORK

In addition to Bond Issues, the Bureau also processes work which is financed by school district funds and budget appropriations, some with partial Federal and/or State subvention. Representative jobs of this category which were completed this past year are:

1. Western Addition Branch Library
2. Eureka-Noe Health Center
3. Hamilton Fieldhouse

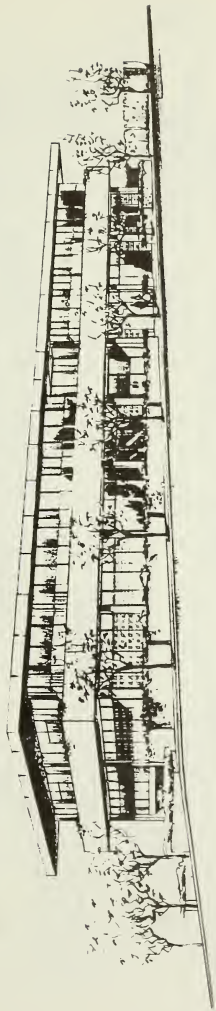
Representative budget work under construction are the Westside Health Center, the Golden Gate Park Nursery, and several extensive school remodeling and modernization projects.



THE AVERY BRUNDAGE
COLLECTION
INTERIOR ENTRANCE TO
THE WING FOR ASIAN ART

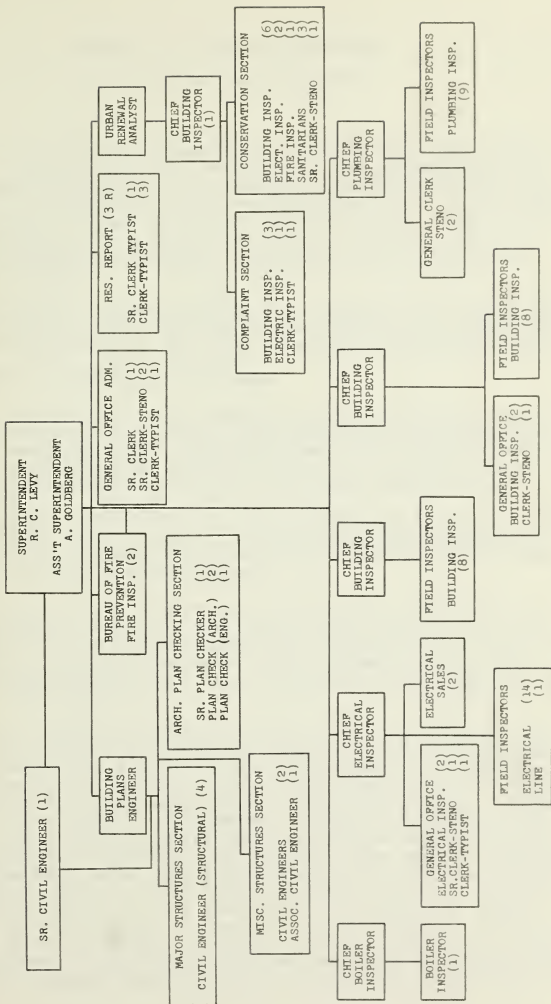


WESTERN ADDITION
BRANCH LIBRARY
S.E. CORNER OF
SCOTT AND POST
STREETS



DISTRICT HEALTH CENTER NO. 3
SILVER AND BARNEVELD AVENUES
CITY AND COUNTY OF SAN FRANCISCO
HERTZKA & KNOWLES ARCHITECTS AIA

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS
ORGANIZATION CHART
BUREAU OF BUILDING INSPECTION
Fiscal Year 1965-1966



BUREAU OF BUILDING INSPECTION

R. C. Levy, Superintendent

The Bureau of Building Inspection has for the last year been engaged in a varying number of activities. The organization has been changed slightly with the addition of a Senior Civil Engineer who is a consultant to the Superintendent and the Assistant Superintendent, as well as to the structural plan checking group. One additional building inspector was also added to work with the Health Department checklist investigations for apartment houses and hotels.

The following is a general descriptive review of the activities of a more unusual nature the Bureau was engaged in together with a detailed accounting of the Urban Renewal Division activities.

Consolidation of Inspection Services

Throughout the fiscal year, a continuing and increasing amount of interest and activity within City government and especially among the industry, labor, property owners, and professional groups has been directed toward obtaining some consolidation of the inspection services involved in building construction.

A comprehensive program of such consolidation was one of the key recommendations of the Arthur D. Little Community Renewal Program which was completed last year. This was discussed at some length in the 1965-66 Annual Report.

Much of the past delay in permit processing and confusion has resulted from the fact that a building permit application must be reviewed by several departments, each having a veto power over its issuance. During construction the contractor may be subjected to conflicting orders from the departments having an interest in the work.

Legislation to achieve this consolidation was presented to the Governmental Services Committee of the Board of Supervisors and was tabled until the proposal could be reviewed by all groups and the legal steps to effect the changes studied by the various City agencies for submission back to the Board in 1966. During this period the Chamber of Commerce, through its Building Code Committee, consisting of representatives of the design profession, construction industry, and property owner groups, together with representatives of labor, have prepared a modified form of consolidation which has been discussed with various City departments. It is expected to be presented to the Board of Supervisors at an early date. One portion of the proposed legislation is a Charter Amendment to Section 38 of the Charter dealing with the powers of the Bureau of Fire Prevention and Public Safety; and the remainder dealing with City Planning, Department of

Public Health, and Bureau of Engineering will be in the form of an ordinance. It is hoped the Charter Amendment will be on the November 1966 ballot.

While not as wide-sweeping as the A. D. Little proposal, it will solve most of the problems of plan checking delays and conflict of orders of the several departments now having joint jurisdiction over construction. In its proposed form it will vest in the Department of Public Works the basic authority and responsibility for plan checking and construction.

HIGH RISE CONSTRUCTION CONTINUES TO CHANGE SKYLINE

The large volume of construction of high-rise buildings during the last few years continued during this year with prospects of still more structures to be built in the coming year. During the past year the forty-three (43) story Wells Fargo Building was almost completed and partially occupied. Steel erection was also completed on the Alcoa office building, Insurance Center Building and the Bank of Hong Kong.

The large amount of office building construction was not the only high-rise construction in the last year. Erected during the year were the Visitation Valley high-rise apartment, apartment buildings in the Western Addition, Jackson Towers and 2020 Vallejo Street. Due to the tight money situation it is expected that a lessening in high-rise residential construction will occur. However, planned for construction this coming year is a twenty-five (25) story and eight (8) story residential-medical complex for the Presbyterian Church, Japanese Cultural Center hotel, and continued construction in the Golden Gateway.

BANK OF AMERICA HEADQUARTERS BUILDING - TALLEST BUILDING WEST OF CHICAGO

The construction of the Bank of America Headquarters building will commence in the Fall of 1966. The fifty-three (53) story structure will occupy almost a complete block in downtown San Francisco and will be the tallest building west of Chicago. Site acquisition has taken some time since the entire block was built up and will require the demolition of a twenty (20) story "modern" building as well as several smaller buildings. Some of the smaller buildings have already been torn down.

The Bank of America Headquarters building will represent a significant addition to the economy of the City and further justifies San Francisco's claim to the "Financial Center of the West". Together with the recently-erected Wells Fargo forty-three (43) story building this new high-rise structure will dominate the downtown skyline.

BOARD OF PERMIT APPEALS

There has been a continuing large number of cases which have been appealed to the Board of Permit Appeals. This Board is one

of three appeals boards, the other two being the Housing Appeals Board, also a lay board, and the Board of Examiners, a board composed of professionals in the building field and covered in the 1965-66 Annual Report. The applicant in a given case always has the option of appearing before either of two Boards, and in some cases the option of all three to whom to present his case. As in previous years, the Bureau has been overruled by the Board of Permit Appeals on almost all cases presented to the Board.

BANK OF CALIFORNIA BUILDS FROM TOP DOWN

One of the most unusual engineering construction jobs in many years involved the construction of the Bank of California high-rise office building. National engineering journals carried detailed accounts of the "up-side-down construction" of the basements of this building.

Due to the presence of ground water immediately below the site and the desire to prevent any damage to adjacent structures, particularly an existing small Bank of California building next door, the Structural Engineer proposed a unique combination of construction practices to accomplish the construction of the basements.

The proposal consisted of three separate actions:

1. By determining and continuously measuring the water content in the various aquifers or water-bearing strata and pumping water back into them to maintain a constant water level, he prevented settlement due to dewatering of the excavation site.
2. By ringing the site with two-foot wide caissons forming a water-tight wall all around the site to a depth of twenty-five feet (25') below the final excavation. All of this was done prior to the commencement of the excavation.
3. He then proceeded to erect the first floor beams and excavate for the first basement level, installed columns and floor beams for that floor level. These exterior columns and grid system served to support his exterior caisson wall, which, in turn, became the side walls of the excavation and a permanent portion of the structure. He then excavated below the first basement floor grillage, hung his columns down into the second floor of the basement and repeated the procedure down to the third level of the basement, finally pouring the base slab in the center of the structure and then out to the sides, completing the basement on the bottom of the building.

The small structure adjacent was an existing Bank of California structure on the site of the original Bank of California office. This structure also represented unusual architectural treatment that is identified with that particular bank and the careful measures used in the construction retained this structure undamaged.

The bank steel framing is now being erected above ground and contains the longest cantilever in office building construction in the world. The cantilever is 29'-3" out from the main columns and is being cambered upward so as to deflect, when loaded, to the horizontal. The available clear office space adjacent to the exterior thus created will represent a very unique office arrangement as well as appearance when the building is finished.

The results of the very unusual approach to the subsurface problems presented clearly indicate that a detailed knowledge of the site, imaginative thinking together with good design, and intensive job supervision can and do achieve notable results.

EFFECTS OF BAY AREA RAPID TRANSIT

The Bay Area Rapid Transit District (BARTD) is expected to award the first contract for the construction of the subway system in San Francisco in late Fall 1966. Construction will possibly commence early in 1967 and this will be followed by a number of other contracts for the complete system in San Francisco.

The subway will run under Market Street and Mission Street at a level of about sixty (60) feet below grade. The deep and wide excavation will require that buildings on either side of right-of-way be checked for possible underpinning requirements. It is the responsibility of the Bureau to satisfy itself regarding the safety of structures within private property or adjacent thereto, such as subsidewalk basements. The Bureau has no responsibility regarding the subway structure either in street areas or in the BARTD right-of-way.

As there will be a large number of buildings involved and since the contracts will require speedy commencement and completion on the part of the contractors, it was felt that all possible work should be done on the part of BARTD, their consultants, and this Bureau to work out the procedures by which the determinations will be made and a tentative method of plan review.

In order to assure the maximum cooperation in this project, the Bureau had contacted the consultants from time to time to advise them of the general requirement to be involved in obtaining the necessary permits for the underpinning of the many structures that will be involved.

A joint meeting of all consultants, BARTD, and the Bureau was held in March to explore the details of the methods to be employed by the consultant, the minimum requirements of the City for review of the plans for underpinning, as well as how the City can accept the consultants' conclusions as to those structures that will not require underpinning. Finally the agreements were reached on all points together with the realization of the need to submit the applications as soon as possible to allow the Bureau structural staff ample time to process the normal workload as well as that relating to BARTD.

It is hoped that with the cooperation of BARTD and their consultants and the early filing of permit applications this additional workload will be able to be handled along with our normal workload without additional delays to any building permit application.

BOARD OF EXAMINERS GRANTS VARIANCE - ST. MARY'S CATHEDRAL

The Board of Examiners, which is the professional review body to the Bureau on matters that have been denied approval of which require interpretation or a variance had, during the year, possibly its most complex and difficult case - the proposed St. Mary's Cathedral.

This structure will be a magnificent building, over 180 feet high, sweeping parabolic shaped tower over a huge base, the tower forming a cruciform at the top in plain view and a square at the base. The base is supported on four massive anchors, one at each corner. The entire structure was originally proposed in reinforced concrete, but its height was at variance with earthquake provisions of the Building Code limit of 160 feet of reinforced concrete. A variance hearing was requested by the cathedral architect before the Board of examiners.

The Board of Examiners requested the American Society of Civil Engineers and the Structural Engineers of Northern California to nominate three eminent structural engineers to act as an advisory expert committee to the Board. These three men attended all the hearings of the Board relating to the subject, and after several months' deliberations presented their report, which contained ten points or conditions upon which a variance could be given. Their report, except for minor administrative revision, was adopted by the Board of Examiners as submitted, and the variance was granted.

The advisory committee consisted of John Rinne, Leslie Graham, and Michael Pregnoff. Their time and expert service to the City deserves the commendation of their associates, and the engineering societies also deserve credit for their civic work.

PLASTICS AND FIRE RESEARCH - ILLINOIS INSTITUTE OF TECHNOLOGY

The San Francisco Building Code regulations for plastics and other interior finishes, which were adopted in 1964-65, have set the pace nationally in regulations of this type. Almost as a direct result of the enactment of the new code provisions and simultaneous with the interest of the Federal Government in the matter of gaining a better understanding of the burning processes, the plastics industry undertook a study at the Illinois Institute of Technology to determine what sort of test program would result in a significant contribution in the new field.

The Superintendent of Building Inspection was invited to become a member of an advisory group to plan the research. Several meetings of the advisory group were held in Chicago and a program of

testing, together with a new test facility, was recommended. The field of burning and the products of combustion of plastics and other materials will be studied under varying conditions of physical arrangement of rooms as well as environment.

At the end of the fiscal year, the second phase of the IIT study was approved, the actual testing to be paid for jointly by the plastics industry and the Federal Government.

The San Francisco Code provisions form the basis of the recommended Code of the plastics industry today. The results of the test program at IIT will undoubtedly greatly influence future Code provisions. Only by conservative steps leading to the development of data does a Code progress and protect both the lives and property of the public while requiring only minimum standards.

TRAINING CLASSES FOR INSPECTORS

The format of the weekly classes for inspectors that have been held for about three years and which dealt with a review of the Codes and the intent of their various provisions and office procedures and policies was changed during this past year.

It was felt that in-depth exposure to the various components and materials of buildings and their use rather than to continue a study of the Code itself would be of more value to the inspectors in their daily routine as well as improve their general knowledge in the building field.

Accordingly, programs were undertaken, one involving automatic fire sprinkling systems, the second a general survey of the structure of buildings and how a building carries and resists the various loads imposed upon it, and a program regarding natural gas, heat, venting and its problems.

The National Automatic Sprinkler and Fire Extinguisher Association offered to present a condensed course on sprinklers for all building and plumbing inspectors of the Bureau. This course was the first such undertaken by this Association in training inspectors. It was highly successful in familiarizing Bureau personnel with the entire picture of sprinklers, including the checking of sprinkling plans. As a result of this course, Bureau inspectors are now plan-checking partial sprinkler system plans submitted for residential occupancies to meet the retroactive requirements for enclosure of stairways.

The second program, which will extend into the coming fiscal year, started immediately at the conclusion of the sprinkler classes. In these sessions basic concepts of structural engineering are explained in a non-mathematical presentation together with the "why" and "how" things work or requirements apply. The various materials and the peculiarities of each, the things to look for on the job, basic errors or problems that frequently

occur are discussed. This is aimed to give the inspector a better speaking knowledge of engineering and an understanding of the basic structural concepts.

After this part of the course is completed, we will have sessions on such things as what an earthquake is and how it acts upon a building and how the building reacts, and the things that are done to lessen the damage and why.

When this basic material has been covered we intend to have industry and professional experts discuss and illustrate such things as welding, concrete technology and problems, wood and plywood, plastering, soil testing, etc.

Although the inspectors employed in the Bureau are knowledgeable men with wide experience in construction, we have found that programs of the type in which we are now involved add greatly to their ability to do a good job, to discuss matters more adequately with engineers and they create greater job interest.

APPROVED MATERIALS CARDS MADE AVAILABLE

The approved materials listings of all materials approved for use in San Francisco have finally been published by a private company in cooperation with the Bureau and are now available on a subscription basis. This listing consists, at present, of over nine hundred separate cards containing a description of the approved material, conditions attached to the approval, and a code number for the approval.

The code number is the key to the filing of these cards in that it represents a coded description of the particular item. By using the code numbering system the file can be arranged by manufacturers either alphabetically or by subject or function.

Bi-monthly supplements are to be issued to subscribers to keep the listing up to date with the latest approved materials. Copies of the listing have been obtained for each building inspector in the Bureau and are also located at the two building inspector counters.

This new service to the construction industry is the culmination of over two years' work in trying to make available to all persons the materials approved for construction in San Francisco. The early response is heartening, and it is hoped that the use of the listing will increase to the point where the design professions and construction industry are familiar with the acceptable products. This will both expedite plan checking and reduce confusion and "stop-work orders" during construction.

REVISION OF BUILDING CODE FORMAT

One of the main comments received in the Bureau from users of the Building Code is, "Why can't you use the same Occupancy designations as the Uniform Code?". We have for some time been concerned with this matter as well as the Code format in general.

People in California generally are familiar with the Uniform Building Code. Therefore, our occupancy numerical system is troublesome for someone versed in the Uniform Code's alphabetical system, which is the same as is used in many other areas.

Furthermore, there is no reason why a particular article in the San Francisco Building Code does not correspond as to subject with the Uniform Code, and, if possible, even sections should relate if they are on a similar subject.

To this end an item was placed in this coming year's budget to hire temporary personnel to effect this transition. This request was supported by the design professions. Unfortunately, it was deleted from the budget at final passage. We will attempt next year to obtain this needed revision so as to simplify the use and understanding of our Code by the construction industries.

ELECTRICAL AND PLUMBING CODE REVISIONS

The complete rewriting of the Electrical and Plumbing Codes continued during the year. The procedure being followed in the Electrical Code revision was outlined in detail on Pages 93-95 of the 1964-65 Annual Report.

The detailed review of the codes being utilized to prepare the new Electrical Code has slowed down the timetable for completion of the draft; however, at the end of the fiscal year good progress was being made with meetings being held at a more frequent schedule and for at least four to five hours at a time. Completion of the first draft is expected in early Spring 1967.

The last portion of the proposed Plumbing Code was sent to industry groups in November 1965. Comments were received from various groups; however, completion of the revised second draft was held up due to lack of time available to work on said draft. It is contemplated that the second draft will be sent to all review groups in the latter part of 1966 together with all replies to comments that were unreconciled in making the second draft. These "unreconciled" comments, together with our reply, will be forwarded to the Chamber of Commerce for further review.

The extensive amounts of time required for code work, particularly in work on a new code or revision of existing codes, was the primary reason for requesting the additional Assistant Superintendent position that unfortunately was again disapproved in the 1966-67 budget.

URBAN RENEWAL DIVISION

Federal Assistance for Conservation Sought

In August of 1965 Congress passed the new Housing and Urban Development Act, which provides federal financial assistance to

cities carrying out concentrated code enforcement programs (FACE) such as our Conservation program. Of possibly even more significance, this law makes available to all property owners rehabilitation loans at 3% interest and grants up to \$1500.00 to low income owner occupants of one- and two-family dwellings. Relocation grants are also provided to families, individuals and businesses required to move because of code enforcement. They must be rehoused in decent, safe, and sanitary housing within their ability to pay.

Prior to submission of the FACE program to the Board of Supervisors public meetings were sponsored by the neighborhood organizations in order to explain the FACE program. Nearly 400 persons attended a meeting in the newly-proposed Arguello Park area. Smaller groups were in attendance at the meetings held in existing Conservation areas.

Testimony before the Board of Supervisors by the presidents of the neighborhood organizations endorsed the City's Conservation program, although some individuals voiced misgivings about involvement with the federal government.

In February 1966 the Board of Supervisors authorized the Director of Public Works, with the approval of the Chief Administrative Officer, to apply for a grant of \$2,600,000 from the Department of Housing and Urban Development. These funds will be used in the Conservation program to hire additional inspectors and clerical personnel and contract with the San Francisco Redevelopment Agency to perform related services, such as relocation services and financing advisory service.

It is anticipated that this FACE program, if approved by the Board of Supervisors and Federal Government, will commence by September 1, 1966.

The use of site offices in each of the four FACE areas has been planned for in order to provide better service, such as permit processing and other advisory services more convenient to the residents of each area.

The four areas included in the application are Glen Park, Great Highway, Buena Vista Heights, existing Conservation areas, and a new area, Arguello Park, in the inner Richmond district.

The Pacific Heights, Visitacion Valley, and West Nob Hill Conservation areas were not included in the FACE application because initial inspections are nearly completed and few buildings remain to be brought into compliance.

PROGRAM PLANNING

The Urban Renewal Analyst has been working with the Planning Department and the Redevelopment Agency in reviewing the areas and programs recommended in the CRP for Redevelopment,

Rehabilitation, Concentrated Code Enforcement, and Reconditioning. It is estimated that a Concentrated Code Enforcement program in eleven areas, containing 16,000 residential structures and 29,000 dwelling units, recommended in the CRP would cost \$15,000,000 and require a \$10,700,000 federal grant. It is also estimated that Concentrated Code Enforcement in six Recommended Title I Rehabilitation Projects, containing 12,000 structures with 27,500 dwelling units, will cost \$9,600,000. Determination of what the City's 1/3 share would be would depend upon the cost of eligible public improvements that can be programmed in these rehabilitation areas.

If a concentrated code enforcement program was to be carried out in the three recommended Reconditioning Areas, containing 4,300 structures, this would cost \$3,400,000. Such areas under the present law are not eligible for the FACE program and, therefore, the cost would be borne entirely by the City.

Coordination of the planning and execution of these federally assisted programs is the responsibility of the Coordinator of Planning, Housing, & Development in the Mayor's Office.

REDEVELOPMENT AGENCY WORK

Inspectors are assigned from both Conservation and Complaint programs to inspect buildings during the survey and planning stage in such areas as the Yerba Buena Center Redevelopment project, the Rapid Transit Corridor - GNRP area, the Inner Mission Redevelopment project, the Western Addition A-2 project, the Hunters Point Project, and the Butchertown project. During project execution, inspectors are assigned to assist property owners in bringing their buildings into compliance under proper permits with City Codes and project standards. This procedure provides continuity of inspection from original inspection through final completion.

Inspectors are assigned to the Central Family Relocation Service to make inspections of referred housing to determine whether it is decent, safe, and sanitary prior to relocating families and individuals displaced by code enforcement or other governmental action.

All work for the Redevelopment Agency is covered by funds under work orders to the Bureau.

THE COMPLAINT PROGRAM

During the past year complaints were investigated throughout the City concerning residential, commercial and industrial buildings. These complaints were received from the district building, fire and health inspectors and the general public. One of the three complaint inspectors has been assigned to perform work for the Redevelopment Agency on a temporary work order arrangement.

Inspection reports are also prepared at the request of the Health Department for their Condemnation Hearings for apartment houses and hotels, for owners of residential buildings requesting physical inspections and Report of Residential Building Record, and for owner-participants in Redevelopment Projects.

STATISTICAL SUMMARY

BUILDING INSPECTION DIVISION

Type Of Construction	1964-65 No. of Permits	1965-66 No. of Permits	1964-65 Estimated Cost	1965-66 Estimated Cost
1A & 1B	37	41	60,913,961	92,455,896
2	3	-	2,118,300	-
3	34	27	6,482,360	14,586,075
4	30	49	941,385	2,062,380
5	808	587	46,743,481	27,521,014
Alterations	<u>12,595</u>	<u>12,633</u>	<u>55,210,411</u>	<u>55,294,750</u>
	13,507	13,337	\$172,409,898	\$191,920,115

Type 1A - Steel frame with reinforced concrete walls and floors. Fire-resistive construction.

Type 1B - Built entirely of reinforced concrete. Fire-resistive construction.

Type 2 - Similar to Type 1, but with limitations.

Type 3 - Wood frame floors with exterior walls of masonry.

Type 4 - Light incombustible frame construction.

Type 5 - Wood frame construction.

ELECTRICAL INSPECTION DIVISION

	1964-65	1965-66
Permits issued, wiring and signs	15,768	14,953
Inspections made	44,693	43,478
Complaints investigated (found defective)	4,006	3,854
Installations in progress as of June 30, 1966	5,371	4,259
Installations completed	15,654	16,225
Pinball machine inspections	440	466
Juke box inspections	32	24
Inspections for nursing and boarding homes for ambulatory patients	168	182
Night Club inspections	108	260
Spray Booth inspections	32	30
Specials (garages, laundries, parking lots, etc.)	240	260

BUREAU OF BUILDING INSPECTION

BUREAU STATISTICS FOR FISCAL YEAR	<u>1964-65</u>	<u>1965-66</u>
Inspections reported by building inspectors	50,844	52,137
Projects remaining on which permits have been issued that have not been reported completed by build- ing inspectors	5,701	5,371
Complaints reported that have been adjusted by building inspectors	2,364	2,713
Inspections reported by boiler inspectors	1,784	1,432
Complaints received and adjusted - boiler and air tanks	396	409
Complaints and requests for informa- tion recorded	217	308
Applications for permits examined and approved by Plan Checking Division	2,445-Bldgs. 1,238-Signs	2,208-Bldgs. 1,290-Signs
Miles traveled during the year by vehicles on inspection service	325,452	324,225
Report of Residential Records issued (3R)	7,197	5,906
Waivers of 3R reports received (first 11 mos. for 1965-66)	1,042	596

PLUMBING INSPECTION DIVISION

	<u>1964-65</u>	<u>1965-66</u>
Plumbing Permits Issued	4,625	4,171
Sewer Repair or Replacement Permits	309	294
Plumbing Installation Removals	9	8
Water Permits Combined with Plumbing	3,285	2,981
Water Permits Issued	1,334	1,420
Gas Piping and Appliance Permits	14,460	12,442
Gas Permits on Plumbing	5,495	4,358
Gas Installation Removals	4	3
Plumbing Inspections Made	15,988	15,851
Water Inspections Made	4,680	3,835
Water Installation Removals	9	9
Plumbing Complaints Investigated	861	984
Condemnation Reports	40	55
Gas Piping Complaints Investigated	11	23
Gas Appliance Complaints Investigated	110	90
Plumbing Installations Completed	5,344	5,027
Gas Lines Inspected Final	4,712	4,106
Gas Appliances Approved	10,662	9,281
Installations uncovered that were without permit and against which penalties were assessed	66	71



GUERDELL SQUARE
COMPLETED COMMERCIAL
DEVELOPMENT OF AN
EXISTING CHOCOLATE
FACTORY--COMPLEX
CONSISTS OF SMALL
SHOPS, ART GALLERIES
AND RESTAURANTS



CATHEDRAL HILL APARTMENTS
PART OF WESTERN ADDITION
REDEVELOPMENT PROJECT

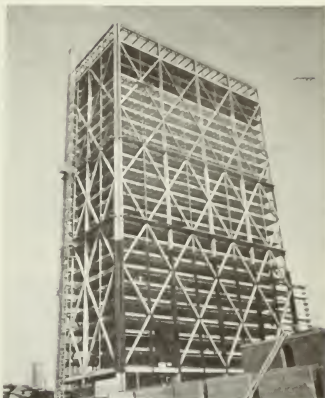


WELLS FARGO BUILDING
TALLEST OFFICE BUILDING
WEST OF CHICAGO--43 STORIES



JAPANESE CULTURAL CENTER
WESTERN ADDITION
REDEVELOPMENT AREA
HOTEL -RESTAURANT-KUBUKI
THEATRE-SHOPS AND A FULL
SIZE PAGODA

ALCOA BUILDING
GOLDEN GATEWAY PROJECT
26 STORY OFFICE BUILDING
UNUSUAL EXTENSION FRAMING SYSTEM
CARRIES FLOOR LOADINGS WITH SOME
"COLUMNS" ACTUALLY HAVING THE FLOORS
HANGING FROM THE COLUMNS



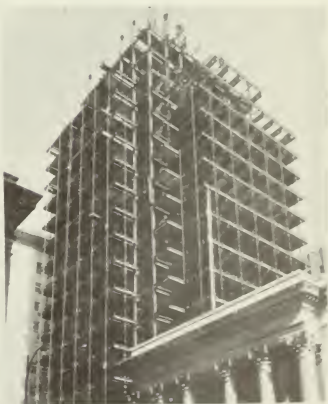
NORTH POINT CENTER
UNUSUAL COMMERCIAL
DEVELOPMENT ALONG
NORTHERN WATERFRONT
AREA--APARTMENTS-SHOPS
GARAGES-RESTAURANTS AND
RELATED FACILITIES ARE
PLANNED FOR AN AREA
COVERING SEVERAL
HUNDRED THOUSAND
SQUARE FEET



FOX PLAZA
TWO STRUCTURES - LOWER STRUCTURE
CONTAINS BANKING FACILITIES, SHOPS
AND RESTAURANTS. TALLER STRUCTURE
30 STORIES. LOWER 12 STORIES - OFFICES
UPPER STORIES - APARTMENTS



THE CANNERY
ONE OF SEVERAL COMMERCIAL
DEVELOPMENTS ALONG NORTHERN
WATERFRONT AREA, UTILIZING
EXISTING INDUSTRIAL BUILDING
FOR SMALL SHOPS, RESTAURANTS
AND OTHER COMMERCIAL USES



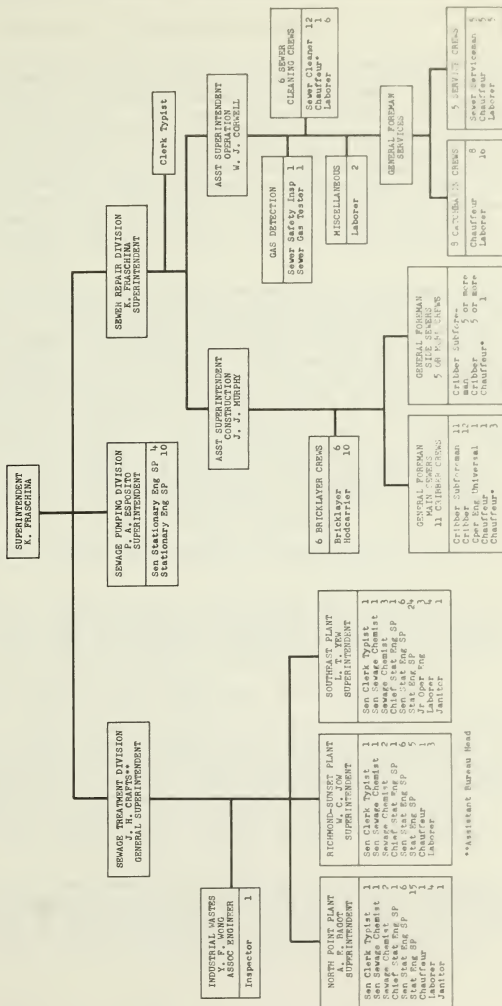
BANK OF CALIFORNIA
OFFICE BUILDING
SEE PAGE 63 FOR
DESCRIPTION OF UNUSUAL
CONSTRUCTION FEATURES

ORGANIZATION CHART

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT

CITY AND COUNTY OF SAN FRANCISCO

JUNE 30, 1966



*Hired with truck

**Assistant Bureau Head

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT

K. Fraschina, Acting Superintendent

The Bureau of Sewer Repair and Sewage Treatment is responsible for maintenance and operation of the City's sewerage system including sewers, pumping stations, treatment plants and outfalls. It is divided into three divisions. The Sewer Repair Division maintains and repairs sewers and appurtenant structures and services complaints on mosquitoes in catchbasins. The Sewage and Waste Treatment Division operates and maintains three primary sewage treatment plants, conducts sanitary surveys of shore waters, regulates and controls industrial wastes discharges to sewers, and advises other City departments on maintenance and operation of their sewage treatment facilities. The Sewage Pumping Division operates and maintains 14 sewage pumping stations.

New employments in the year were one Associate Civil Engineer in the Industrial Wastes section and one Stationary Engineer SP in the Sewage Pumping Division. In addition, the Clerk Typist in the Sewer Repair Division was transferred from the Bureau of Accounts budget to the Sewer Repair budget. As of June 30, there were 109 budgeted employees in the Sewer Repair Division, 102 in the Treatment Division, and 15 in the Pumping Division, for a Bureau total of 226. These are supplemented by 10 maintenance personnel for the Treatment Division assigned from other bureaus and departments, and 5 trucks with drivers hired by Sewer Repair on a contractual basis. In addition, the Sewer Repair Division employed from 12 to 16 non-budgeted employees (20 are authorized) for installation and repair of side sewers which are paid for by property owners. The amount of this work varies with activity in the building industry.

The organization chart shows distribution of personnel by major Bureau functions.

Passage in May 1965 of the Ordinance increasing the limitation on non-contract work from \$2,000 to \$5,000 greatly facilitated the work of the Bureau. It was not necessary to declare a single emergency during the year because of the \$5,000 limitation.

The most noteworthy events in the year were the following:

Grease discharge by a meat packing plant into the Fourth and Tehama Street sewers has finally been brought under control. The meat plant has installed grease removal facilities and diverted the treated flow to the Howard Street sewer. Nevertheless, it was necessary to spend about \$11,200 in man power during the year to complete cleaning the Fourth and Tehama Street sewers. Since the source is known, steps are being taken by the City to recover the cleaning costs.

In December high concentrations of combustible gas were observed in the Mendell Street sewer system north of Davidson and the system was found to be partially plugged with grease. At first the combustible gas was thought to be escaping from nearby natural gas lines, but

ORIGINAL ARTICLES

THE EFFECT OF THE VARIOUS TYPES OF EXERCISE ON THE HEART RATE AND BLOOD PRESSURE

JOHN H. HARRIS, M.D., and J. H. HARRIS, JR., M.D.,
The University of Chicago, Chicago, Ill.

Received for publication, February 1, 1919.

The purpose of this study was to determine the effect of the various types of exercise on the heart rate and blood pressure. The subjects were ten healthy young men, aged from 20 to 30 years, who had no history of heart disease and were not taking any drugs. The exercise was performed on a bicycle ergometer, and the heart rate and blood pressure were measured before, during, and after the exercise. The results showed that the heart rate increased during the exercise and returned to the normal level after the exercise. The blood pressure also increased during the exercise and returned to the normal level after the exercise.

It was found that the heart rate and blood pressure were affected by the intensity of the exercise.

The heart rate increased during the exercise and returned to the normal level after the exercise.

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later it was established to be originating from breakdown of the deposits in the sewer. This is the first time in Bureau history that combustible gas in quantity sufficient to form an explosive mixture has originated from deposits in a sewer. The situation was corrected by removing over 1,500 cubic feet of grease at a cost of about \$5,300 to the City. The Industrial Wastes section made an intensive investigation and found three possible sources of grease. These sources are being closely watched and it is believed the problem can be kept under control by frequent inspection.

In January, a contract was completed for replacing with vitrified clay pipe 250 feet of collapsed 42-inch concrete intercepting sewer in Golden Gate Park near 46th Avenue and Fulton Street mentioned in last year's report.

On February 2nd at about 10 a.m. a 50 foot long by 30 foot wide section of Post Street west of Larkin Street collapsed because of failure of the 3 foot by 5 foot brick sewer. By 5 p.m. emergency Sewer Repair crews had cleared away the debris, constructed a temporary plank invert in the sewer, and shored the hole sufficiently to allow one lane of traffic on the street. Crews working all night completed repairing the sewer by the next morning, and the Bureau of Street Repair was able to complete backfilling and repaving in time to restore the street partially to service that evening and fully to service by 10 a.m. the next day.

In March, two pumps at the Yosemite Pumping station failed allowing partial overflow of raw sewage to the bay during part of the month. One pump was replaced and the other repaired under emergency procedures and the plant restored to full capacity in May.

Budget expenditures for the fiscal year totaled \$2,914,252 of which \$1,456,531 was for treatment plants and industrial wastes control, \$1,249,221 for sewer maintenance and repair, and \$208,500 for pumping stations.

In addition, the Sewer Repair Division expended \$215,092 for side sewers paid for by property owners and \$1,519 on work orders from other departments. The Sewage Treatment Division received \$966 for advisory services to other departments.

SEWER REPAIR DIVISION

The Sewer Repair Division cleans, repairs, maintains and makes minor additions to the various components of the sewerage system including main sewers, side sewers and appurtenant structures. The Division also tests for explosive and other gases in the sewer system and controls mosquitoes in catchbasins.

In order to organize the work, the personnel are divided into units or working groups consisting of sewer cleaning units, eductor units, service units, main pipe sewer units, bricklayer units, side sewer units, gas detection unit, material trucks, digging unit and compressor unit. While many of these groups frequently assist each other, the latter three may be considered almost entirely subsidiary in that their principal function is to assist other units

in the performance of their work. A summary of the activities of these working units is shown in the accompanying tabulation.

SEWER CLEANING

Sewer Cleaning units clean main sewers, sumps and tanks at pumping stations and treatment plants, do miscellaneous work in connection with sewers and handle complaints during storms when service crews cannot handle all calls.

Sewers are normally cleaned by buckets dragged between manholes. Other methods used are rodding of pipe sewers and manual cleaning of large sewers. Many miles of sewers are also cleaned by flushing rather than by these more laborious methods.

There are 6 sewer cleaning units, each manned by two sewer cleaners and one laborer and equipped with a specially designed truck with the necessary hoses, hand tools, buckets, cable and power hoists.

Routine activities during the year were principally in the South of Market district. However, the grease problems in the Fisherman's Wharf area have continued to plague the Bureau and to reduce the manpower available for the routine work.

EDUCTOR OPERATIONS

An eductor unit consists of a truck mounted Elgin eductor with a gasoline powered pump and tank manned by a chauffeur and two laborers. Its principal function is the cleaning of catchbasins, but being a very versatile unit, it is put to many other uses where a source of water is needed or where pumping is required. There are normally 8 eductor units operating with two additional machines for standby. Service requirements for these units has increased to the point that there are at practically all times at least two in the shop awaiting repairs.

SERVICE UNITS

Service units service complaints from the public and other sources, wet down main and side sewer backfills, flush sluggish or temporarily clogged pipe sewers, establish the necessity for specialized work by other crews and do miscellaneous emergency work.

Each of the 5 crews consists of one sewer serviceman, one chauffeur and one laborer and uses a one-ton truck with a special utility body equipped with hoses, lights, barricades and other tools and equipment. Four of the crews are on regular day work and the fifth unit works evenings from 4 p.m. to midnight.

Service crews spent 45.2% of their time on service calls and 54.3% on other work. During the fiscal year a total of 10,280 calls were made, 5,409 on complaints and 4,871 on other work.

EXPENDITURES

PERSONAL SERVICES	<u>Sewage Treatment</u>	<u>Sewage Pumping</u>	<u>Sewer Repair</u>
Permanent Salaries*	\$819,374	\$139,731	\$108,233
Overtime*	1,559	300	3,009
Holidays*	21,543	5,645	959
Temporary Salaries*	27,401	7,361	
Wages (Per Diem)	125,821		934,044
Sub-Total	995,698	153,037	1,046,245
CONTRACTUAL SERVICES			
Power & Gas**	115,047	34,219	
Plant Equipment	66,290	15,960	
Field Equipment	4,446	620	40,134
Sludge Disposal	31,144		
Landscape Maintenance	17,768		
Miscellaneous Services	5,946	1,115	10,057
Hired Trucks			57,077
Sub-Total	240,641	51,914	107,268
MATERIALS AND SUPPLIES			
Replacement Parts	38,893	1,371	953
Field	520		44,742
Plant	18,764	1,527	
Fuels and Lubricants	2,947	651	13,729
Treatment Chemicals	135,926		
Sub-Total	197,050	3,549	59,424
EQUIPMENT			
New	9,150		2,753
Replacement	13,992		33,531
Sub-Total	23,142		36,284
TOTAL	\$1,456,531	\$208,500	\$1,249,221

* For Monthly Employees

** In Public Utilities Commission Budget

The following tabulation shows a breakdown of the work:

<u>TYPE OF WORK</u>	<u>CALLS</u>			
	<u>Number</u>		<u>Percent</u>	
SIDE SEWER				
Relieved clogged sewer	2,962		28.8	
Found trouble inside property	1,173		11.4	
Wet down backfill	161		1.5	
Determine if side sewer exists	707		6.9	
Found side sewer broken	234	5,237	2.3	50.9
MAIN SEWER				
Found main sewer broken	408		4.0	
Relieved clogged main sewer	510		5.0	
Examine condition	1,461		14.2	
Wet down backfill	175	2,554	1.7	24.9
CATCHBASINS AND MANHOLES				
Remove obstruction	459		4.5	
Replace cover	221		2.1	
Silence noisy cover	191		1.9	
Examine condition	505	1,376	4.9	13.4
MISCELLANEOUS				
Service lights and barricades	429		4.2	
Investigate seepage and leaks	284		2.8	
Clean at pump stations	218		2.1	
Deliver material to job	68		0.7	
Remove deposits on sidewalk	15		0.1	
Not classified	99	1,113	0.9	10.8
TOTAL		10,280		100.0

During the year the Sewer Cleaner mosquito abatement crew sprayed 12,773 catchbasins for mosquito control. In former years these were reported in the tabulation above. There were no mosquito complaints handled by Service crews in the year.

MAIN PIPE SEWERS

Cribbing crews excavate, lag and backfill main sewer trenches; lay pipe in the 6- and 8-inch sizes; excavate, lag and backfill for structure repairs; cut pavement; and do miscellaneous work. When conditions are right these crews frequently are assisted by the digging unit. There are normally 11 cribbing crews each consisting of a cribber and a cribber sub-foreman although this arrangement is subject to some variation to suit conditions. One crew is assigned to the compressor unit and spends most of its time cutting pavement for the other crews.

BRICKLAYER WORK

Bricklayer crews repair main brick and concrete sewers, construct and repair manholes and catchbasins, lay sewer pipe and do miscellaneous brickwork when required.

There are two types of bricklayer crews, top crews and underground crews. A top crew consists of a bricklayer and a hodcarrier equipped with a 1-1/2 ton truck. Their functions are to repair catchbasins and manholes, lay pipe in trenches and do miscellaneous brickwork. An underground crew consists of a bricklayer and two hodcarriers equipped with a trailer mounted tool box. Their function is to repair large brick and concrete sewers which can be worked on from inside.

SIDE SEWERS

Side sewer crews excavate, lag and backfill sewer trenches, and lay sewer pipe. A cribber and a cribber sub-foreman normally constitute a crew and the number of crews varies with the demand for this type of work which is dependent upon activity in the building industry. Three of the crews are motorized and carry sufficient tools, equipment and materials to complete a job and move without delay. Non-motorized crews are equipped with trailer mounted tool boxes and must be moved by the hired trucks. Since side sewers belong to the fronting property owners, all side sewer construction and repair is at the property owner's expense. All such work is done by this Bureau except where side sewer construction is included with main sewer construction under public contract.

GAS DETECTION

The primary function of the gas detection unit is to conduct a continuing City-wide testing and inspection survey of the sewerage system and to supervise the use of gas detection equipment by underground workers. Tests for explosive and toxic gases are made at sewer manholes and at special locations such as pumping stations and sewage treatment plants. The gas most frequently detected is methane which usually results from leakage in gas mains and services.

The gas detection unit also assists actively in the maintenance of safety standards in all work of the Sewer Repair Division.

The unit is also in charge of photographing the interiors of sewers. During the year, 13,637 feet of main sewer were photographed. The

photographs have proven invaluable in establishing the condition of sewers.

MATERIAL TRUCKS

Five trucks together with their drivers are hired on a contractual basis to assist in the work of the Division. These trucks haul materials and equipment to jobs, remove waste material to dumps and move non-motorized units from one location to another. One of these trucks is assigned the duty of visiting all jobs on Saturdays, Sundays and holidays and seeing that all lamps and barricades are in proper order.

DIGGING UNIT

This unit consists of a combination front-end loader and backhoe which is manned by an operating engineer, universal. This unit assists in any excavation work where the danger of damage to other utilities is not excessive.

COMPRESSOR UNIT

This unit consists of a truck mounted compressor together with tools manned by one cribber, one cribber sub-foreman and a chauffeur. It is used to assist other groups, principally main sewer crews, in opening streets for excavation.

Sewer Repair Division
Work and Cost Distribution

Work Unit	Per Cent	Totals	Unit Cost
1 Sewer Cleaning	91.2 8.8	Cleaning sewers \$143153 Other work 13891	\$0.26
2 Eductor Operations	55.7 44.3	Cleaning catchbasins 99891 Other work 79451	7.89
3 Services	45.2 54.8	Servicing complaints 65247 Other work 79120	12.06
4 Main Pipe Sewers	100.0	Repairing pipe sewers 257623	40.67
5 Brickwork	72.0 1.8 6.4 9.0 10.8	Repairing brick sewers 110631 Building catchbasins 2689 Building manholes 9912 Repairing catchbasins 13817 Repairing manholes 16564	7.19 896.33 826.00 59.56 64.20
6 Side Sewer Work		Installations 151033 Repairs 62302 Connections 2958	539.40 441.86 84.51
7 Gas Detection	9.2 90.8	Testing manholes 1355 Other work 13314	1.17
8 Work Orders and Special Jobs			
9 Miscellaneous			
Total not including work unit 6			
Work unit 6			
Grand Total		\$1167145	

NOTE: The costs tabulated here do not include overhead or other indirect charges.

SEWAGE PUMPING STATIONS

The Sewage Pumping Division operates and maintains 14 permanent stations, four of which are in the North Point drainage district, six in the Richmond-Sunset District, and four in the Southeast district. The stations pump sewage from low areas of the City into gravity sewers leading to the treatment plants. Their capacity is sufficient to handle sanitary sewage plus runoff from rainfall of 0.02 inch per hour. Excess storm flow is diverted to the bay or ocean.

In addition to the 14 permanent stations the Division operated and maintained four other stations during the year. The Commercial Street station, which was scheduled for shutdown on completion of Drumm Street station, continued operating to handle sanitary flow from two buildings yet to be demolished for the Golden Gateway redevelopment. The emergency station at Twenty Second Street and Tennessee was operated until January when a privately operated station was installed by the area developer.

The Lakeshore station, which was one of two stations replaced by the Lake Merced station, did not operate but was maintained in operating condition until January when it was dismantled and abandoned. The Park Merced station was maintained in operating condition as a permanent standby and operated four times during the year.

The three most modern stations, Fourth Street, Drumm Street and Lake Merced, are equipped with variable speed drives. Pumping is continuous and the rate is varied in proportion to flow by pneumatic sensing devices. Pumps in the other stations operate intermittently and are controlled by preset float operated switches.

As a result of the employment of an additional Senior Stationary Engineer SP and the completion of the central overflow alarm system in June 1965, station coverage was increased on July 1 from 8 hours per day to 24 hours per day, 7 days per week. The crew on duty travels from station to station doing routine servicing and maintenance, and responds to emergencies signaled by the alarm system. It is still necessary to have a Stationary Engineer SP on duty five days a week at the Drumm Street station to prevent flooding of downtown area basements and one at the Marina station to prevent pollution at Yacht Harbor and Aquatic Park areas from station malfunction.

These changes have reduced frequency of stations by-passing, but preventable by-passing still occurs. This could be corrected by increase in personnel and budgeted funds for maintenance and repair, and by providing a truck equipped for most repairs.

Vandalism is a continuing problem at the stations. Windows were broken in the Drumm Street and Sea Cliff No. 2 stations. The worst vandalism has occurred at the Pinelake station, where the exterior was defaced, locks broken, and the door smashed numerous times in the year.

Sewage Pumping Stations
Expenditures and Cost Data

Location	Drainage Area In Acres	Million Gallons Pumped	Salaries	Main-tenance	Power	Materials & Supplies	Equipment	Totals	Cost Per Mil Gal Pumped
General	*		\$7,464	\$752	\$5	\$656		\$8,877	\$1.07
Commercial Street	X	163	1,926		981	11		2,918	17.90
Drumm Street		840	11,142	498	4,033	444		16,087	19.15
Fitzgerald Avenue		84	1,451	447	705	7		2,610	31.07
Fourth Street		1,836	31,929	2,408	5,336	301		39,974	21.77
Fulton Street		80	1,450	2,336	688	120		4,594	57.43
Hunters Point		122	2,195	187	799	20		3,201	26.24
Hyde Street		54	725	884	271	16		1,896	35.11
Lake Merced		782	11,704	2,763	4,211	152		18,836	24.08
Lakeshore	Y				762			762	
Marina		2,160	39,351	3,504	6,724	693		50,272	23.27
Mariposa Street		267	6,208	568	1,448	7		8,231	30.83
Park Merced	YY	36	75	33	1,458			1,566	43.50
Pinelake		4	363	255	128			746	186.50
Sea Cliff #1		3	363	278	73	11		725	241.67
Sea Cliff #2		84	1,813	300	1,415	42		3,570	41.03
Tennessee Street	Z	1	17	63	38			118	**
Vicente Street		72	1,508	1,175	569	100		3,352	46.56
Yosemite Avenue		1,277	33,353	1,244	4,575	999		40,171	23.53
Totals		4,372	\$153,037	\$17,695	\$34,219	\$3,549		\$208,500	\$25.13

X Commercial St handled 16% of area flow during year. Total area flow transferred 6-21-66 to Drumm St.

Y Abandoned & dismantled January 1966. Drainage area of 152 acres included in Lake Merced.

YY Used as stand-by for Lake Merced. Drainage area of 212 acres included in Lake Merced.

Z Abandoned to redevelopment area contractor January 1966.

* Power bills for 24th Avenue & Lake Street Gate included in General costs (Power and Light).

** No means available for measuring flow.

In June, the sand traps at the Fitzgerald and Mariposa Street stations were eliminated, and the pump sump at the Mariposa Street station was reshaped to control solids deposition. These changes are expected to greatly reduce or completely eliminate the need for by-passing the stations to clean the bar racks and sumps.

The Fourth Street South and Twentieth Street pumping stations which will divert the remaining 0.2% of untreated sewage in the City to the treatment plants, are scheduled for completion in August.

Contracts were let by the Bureau of Engineering at the end of the year for a check valve closing control system at the Lake Merced station to prevent water hammer damage and for revision of the influent gate and pump controls at the Marina station.

SEWAGE AND WASTE TREATMENT DIVISION GENERAL

The sewage and Waste Treatment Division operates the North Point, Richmond-Sunset and Southeast Sewage Treatment plants, controls discharge of industrial wastes, and advises other City Departments on sewage treatment facilities under their jurisdiction.

The Bureau of Engineering designs capital improvements. Other Public Works bureaus and the Purchaser's shops do major repairs and maintenance requiring specialized crafts. The Bureau of Street Cleaning and Planting maintains landscaping.

Chlorination at the North Point plant was increased in January to meet the requirements of Regional Water Quality Control Board Resolution 718. The plant now chlorinates effluent at all times except when storm overflow occurs.

At the Richmond-Sunset plant, work on the contract to increase sedimentation capacity and improve chlorination facilities begun in May 1965 continued through the year. Because of construction requirements, one sedimentation tank was out of service in July and August, and two the rest of the year with adverse effects on effluent quality. In June, a new larger sedimentation tank and one modified and enlarged tank were placed in service, improving effluent quality. The digester gas recirculation system compressor had to be taken out of service for repair by the manufacturer, which interfered with digester operation. Therefore a contract was let to install a standby compressor to prevent digester failure from compressor malfunction. The main power feed line to the Pretreatment building failed in November. An emergency line was installed above ground to keep the plant operating. Correction of this problem is now under study by the Bureau of Engineering.

At the Southeast plant, modernization of raw sludge thickening and digested sludge elutriation facilities was completed in September. The reshaped sludge hoppers appear to have greatly reduced sludge withdrawal difficulties. Warranty testing of the automatic draw-off control is still in progress. Excessive scum formed in Digester No. 7. Warranty testing of the gas recirculating system has

[illegible]

— 2025.01.01

Schizothorax

been suspended until the manufacturer is able to solve the scum problem.

Freeway construction in the vicinity of Army and Iowa Streets required relocation of a two block long section of the sludge force main from the North Point to the Southeast plant. In addition, a temporary section of line was installed in Mariposa Street between Iowa and Indiana Streets until a bridge at this location is rebuilt. The installation work did not interrupt sewage treatment at the plants.

SEWAGE TREATMENT METHODS

At each plant sewage is treated to remove oil, grease, floating material, grit, and settleable solids. Grit from all plants and screenings from the North Point and Southeast plants are hauled by truck to the garbage fill south of the county line. Screenings at the Richmond-Sunset plant are incinerated and sludge at this plant is digested in two-stage digestion, elutriated, and de-watered by vacuum filtration. Filter cake is hauled to City parks for use as soil conditioner. Raw sludge from the North Point plant is pumped to the Southeast plant, where it is combined with raw sludge from the Southeast plant for treatment by thickening, two-stage digestion, elutriation, and vacuum filtration. The filter cake, except for a small portion used in City parks, is hauled under contract to the garbage fill south of the county line for burial.

TREATMENT PLANT OPERATION

	<u>North Point</u>	<u>Richmond- Sunset</u>	<u>Southeast</u>
Sewage Flow, Million Gallons			
Total (a)	19,778	6,412	6,983
Avg day	54.2	17.6	19.2
Avg day, dry weather (b)	51.9 (c)	18.5 (d)	18.3 (d)
Max day, wet weather	91.7	20.5	30.9
Max day, dry weather	64.0	20.8	25.2
Max rate, wet weather	133	35	40
Max rate, dry weather	80	33	36
Screenings, cu ft			
Total	74,198	24,264	38,463 (e)
Max day	420	152	324
Per million gallons	3.8	3.8	5.5
Grit, cu ft			
Total	60,659	42,660	(e)
Max day	486	386	
Per million gallons	3.1	6.7	
Chlorination, lb (f)			
Pre	331,930		
Post	1,442,920	536,200	
Total	1,774,850	536,200	
Mg per liter, dry weather	14.8	10.0	
Sludge Solids, M lb (dry)			
From sedimentation	26,049		87,504 (g)
To digesters		3,482 (h)	56,130
Filter cake		821	12,822 (i)
Ferric Chloride			
Total, lb		42,240	966,500
% filter cake solids		5.14	7.54
Gas Production, M cu ft			
Total		39,119 (j)	265,666
Avg day		107	728
Power and Gas Purchased			
Power, total M kwh	5,654.4	1,860.8	4,903.2
Power, avg/mo, M kwh	471.2	155.1	408.6
Natural gas, total C cu ft	78,218	27,730	4,292
Natural gas, avg/mo, C cu ft	6,518	2,311	358
Hauling			
Trips, grit & screenings	685		310
Trips, grit		309	
Trips, filter cake to parks		255	6

NOTES:

- (a) For 365 days North Point, 362.1 days Richmond-Sunset during which part of flow was bypassed on 8 days for plant reconstruction, 364.4 days Southeast.
- (b) Excluding days with .01 inch or more rain and dry days following days with .05 inch or more rain.
- (c) Decrease from prior year due to reduction of salt water infiltration into collection system.
- (d) Excluding days flow partially bypassed for plant reconstruction or malfunction.
- (e) Combined screenings and grit; not possible to separate screenings and grit since they are mechanically and continuously discharged to a common storage bin.
- (f) North Point: prechlorination July through November and May through June; postchlorination July through November, during extended dry weather periods December through January 20, and continuous except during storms from January 21. Richmond-Sunset: postchlorination continuous except during storms.
- (g) Includes recirculating load from raw sludge thickening and digested sludge elutriation overflows.
- (h) Decrease from previous year due to reduced efficiency during sedimentation tank reconstruction.
- (i) 19332 tons (wet basis) hauled under contract to sanitary fill at \$1.611 per ton and 22 tons (wet basis) used by City.
- (j) Metered quantity only; considerable gas wasted at digester pressure reliefs without metering.

THE FIRST OF THE MONTH OF JANUARY, 1880, THE
SOCIETY OF THE FRIENDS OF THE AFRICAN
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COST OF OPERATION

Cost of operation was approximately \$1.92 per capita based on an estimated tributary population of 760,000.

MAJOR MAINTENANCE

NORTH POINT PLANT:

Renewing main sludge collectors in No. 3 and 4 sedimentation tanks.
Renewing chlorine storage tank piping and valves.
Sandblasting and painting Pretreatment and Administration buildings and Influent Gate house exteriors.

RICHMOND-SUNSET PLANT:

Rebuilding No. 1 filter vacuum pump.
Renewing screenings incinerator exhaust system.
Rebuilding chlorinator and chlorine evaporator.
Repairing radiant heating system in Administration building.
Connection to raw sludge lines to allow circulation of heated digested sludge.
Rebuilding vent hood over raw sludge thickening tank.
Renewing high pressure water supply system.
Renewing collectors in No. 3 grit tank and east elutriation tank.
Painting Sunset Pump room and color-coding pipe lines.

SOUTHEAST PLANT:

Renewing main and cross sludge collectors in No. 3 sedimentation tank.
Rebuilding hydraulic rams on filter cake storage bin.
Replacing iron flights and cast iron wearing shoes in grit tanks with redwood flights and angle iron shoes.
Rebuilding No. 4 main lift pump and motor.
Rebuilding No. 1 boiler main stop and safety valves.
Rebuilding bar screen foot shafts and sprockets to provide pressurized water flushing and lubrication of bearings.
Repainting exteriors of six buildings.

SPECIAL STUDIES AND INVESTIGATIONS

1. Completed:

Special samples at Log Cabin Ranch for Bureau of Engineering, Chlorine residual and coliform mortality.
Coliform die away rates in bay water.
Chlorine requirement survey of Southeast district interceptors.
Evaluation of polypropylene filter cloths.
Preliminary evaluation of grit cyclone lining materials and nozzle sizes.

2. Continuing:

Identification of source in leak and seepage complaints.
Receiving water monitoring programs required by Regional
Water Quality Control Board.
Sanitary survey of bay and shore waters.
Identification of industrial wastes.
Comparison of materials for Purchasing Department.
Evaluations of polymer coagulants for vacuum filtration.
Effect of suspended solids on chlorine residual and coliform
mortality.
Comparison of coliform and enterococcus die away rates in
bay water.
Evaluation of column partition chromatographic volatile
acids test.

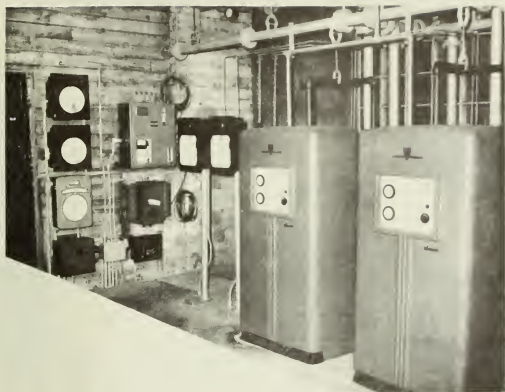
INDUSTRIAL WASTES

During the year 3,120 routine inspections were made and 442 complaints were investigated. A total of 1272 samples were taken, including 36 from one tannery. Three discharge cease and desist orders were issued.

As a result of the inspections and investigations the following private pretreatment units were installed or improved:

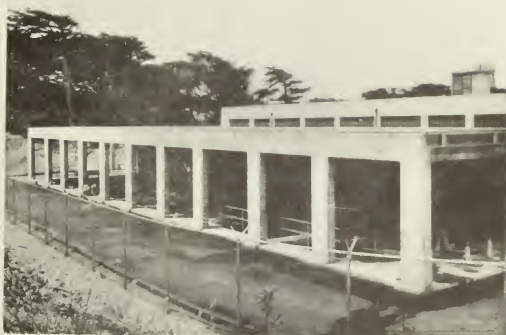
Screens, grease separators, and rotating skimmers at two rendering plants.
Settling basins at three concrete mixing plants.
Snag machines, screens, catch basins, and settling tanks at two tanneries.
Screens and settling basins at six coffee processing plants.
Holding and neutralizing tanks at three plating works.
Neutralizing tanks at two meat packing plants.
Screens and settling basins at three paint manufacturing plants.
Re-routing building and side sewer lines at two rendering plants.

In June, the section received delivery of a van type truck which is being equipped for use as a mobile laboratory. This will expedite difficult investigations.



NEW CHLORINATION
FACILITIES AT
RICHMOND--SUNSET
PLANT

NEW SEDIMENTATION
TANK AT RICHMOND-
SUNSET PLANT

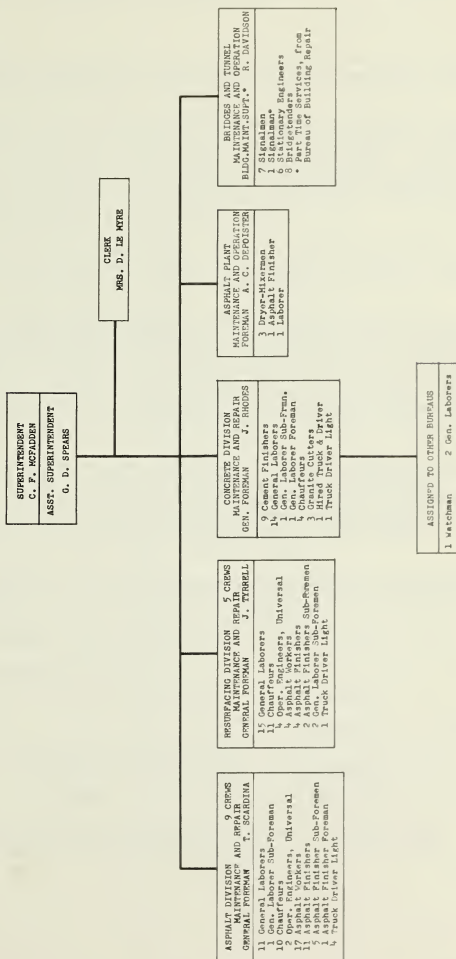


ORGANIZATION CHART

BUREAU OF STREET REPAIR

CITY AND COUNTY OF SAN FRANCISCO

JUNE 30, 1966



BUREAU OF STREET REPAIR

C. F. McFadden, Superintendent

FUNCTIONS

The functions of the Bureau of Street Repair have been set forth in previous reports as follows:

Routine work includes the maintenance and repair of streets and appurtenant structures such as gutters, curbs, retaining walls, public stairways, pedestrian underpasses and overpasses, guard rails and fences; the maintenance of a City dump; the maintenance and operation of lift bridges, tunnels and a pumping station in the Geary Street underpass at Fillmore Street.

Work ordered by the Director includes traffic channelization, minor street alterations, minor construction and emergency work for the protection of the City and/or the public.

Work performed for other departments or bureaus includes the repair of pavement in Municipal Railway track areas, the repaving of trenches opened by the Bureau of Sewer Repair for the installation or repair of side sewers, the repair of certain State highways within the City and the repair of pavements in school yards and the yards of other City institutions. The Bureau also performs other minor services of varied nature.

The City's charter provides the repair or reconstruction on any one job shall not exceed a cost of \$5,000. It also prohibits work on unaccepted streets, except in emergency, and on sidewalks in front of private property. Unaccepted streets are those streets that have not been properly improved and officially accepted for maintenance and repair by the City.

Activities are further limited by State law governing the expenditure of monies from which the bureau is financed.

Maintained road mileage is as follows:

Select System (Comprised of Major Arterial Streets and Collector Streets)	323.34
Other Streets	505.97
State Highways (by maintenance agreements)	<u>10.37</u>
TOTAL	839.68

Inasmuch as San Francisco is a combined City and County, its streets and road systems are one and the same.

ORGANIZATION AND PERSONNEL

On February 1, 1966, Mr. James Tyrrell was appointed permanent 7282 Street Repair General Foreman, replacing Mr. John Barry, who retired after 36 years of service with the Bureau.

Numerous limited tenure appointments were made during the year in the class of 7354 Truck Driver Heavy, due to the fact that there is no established Civil Service list for the position. It is hoped that an examination will be held during the coming fiscal year so that these vacancies can be filled on a permanent basis.

The basic organization of the Bureau remained about the same as for the previous year and no significant changes are contemplated in the immediate future. An organization chart, as of June 30, 1966, accompanies this report.

EQUIPMENT

New equipment procured during the year consisted of a conditioned-air helmet system, designed to clean the air breathed by machinery operators, and an asphalt spreader box.

The operator of our Heater-Planer is exposed to heavy concentrations of smoke and fumes caused by the burning and planing of asphalt pavements. The new conditioned-air helmet system, purchased by the bureau, is designed to clean the air breathed by the operator. It consists of an enclosed, multiple filtering unit which removes smoke, fumes and ultra-fine particles, and delivers clean air through a flexible hose attached to a shock-proof glass fibre helmet. Filtered air is diffused downward, across the operator's face, and discharges through a shoulder shroud with sufficient force to prevent entrance of pollutants.

Equipment replacements consisted of one dump truck, one motor grader and two pavement breakers. Although funds for replacement of a heater-planer were allowed, we were unable to locate a suitable replacement. Subsequently, arrangements were made to have our present heater-planer completely overhauled.

EXPENDITURES

Accompanying tabulations show expenditures for each of the several budgeted items for each of the past five years. Percentage increases for road repair costs, wage rates and material prices are shown with the tabulations of expenditures for "Street Repair". Percentage increases for bridge, tunnel and underpass maintenance and operation costs and for salary rates are shown with the tabulation of expenditures for "Bridges, Tunnels and Underpasses".



LE TOURNEAU -
WESTINGHOUSE
MOTOR
GRADER



HYDRAULIC CRANE TRUCK MOUNTED
USED IN CURB SET OPERATIONS



NEW ROLA--PAVER ASPHALT
SPREADER BOX
EQUIPPED WITH TOWING ARMS



REDRESSING SALVAGED
GRANITE CURB

WORK PERFORMED

	<u>Unit</u>	<u>Quantity</u>	<u>Total Cost</u>	<u>Unit Cost</u>
Asphalt Resurfacing - Hand Asphalt Paving	Sq. Ft.	443,624	\$65,351	\$.1473
(133.2 sq. ft. per ton)	Tons	3,330		19.625
Asphalt Resurfacing - Machine Asphalt Paving	Sq. Ft.	4,591,895	288,604	.06285
(163.5 sq. ft. per ton)	Tons	28,077		10.279
Asphalt Resurfacing - Box Asphalt Paving	Sq. Ft.	787,381	101,381	.12875
(122.0 sq. ft. per ton)	Tons	6,453		15.710
Asphalt Patching	Sq. Ft.	797,856	245,786	.308
(152.8 sq. ft. per ton)	Tons	5,220		
Asphalt Paving (Cut-outs)				
Compressor Work	Sq. Ft.	218,649	41,143	.1882
Asphalt Paving	Sq. Ft.	261,280	60,149	.2302
(100.7 sq. ft. per ton)	Tons	2,594		
Cleanup		261,280	69,797	.2671
Curb Reset and Replaced				
Compressor Work	Lin. Ft.	37,731	50,954	1.350
Granite Reset	Lin. Ft.	17,882	37,308	2.086
Granite Replaced	Lin. Ft.	4,165	13,111	3.148
Concrete Reset	Lin. Ft.	732	1,665	2.275
Concrete Replaced	Lin. Ft.	5,164	18,760	3.633
Pavement-Asphalt	Sq. Ft.	54,615	27,308	.500
Pavement-Concrete	Sq. Ft.	3,725	5,623	1.510
Sidewalk	Sq. Ft.	23,145	27,165	1.174
Cleanup	Lin. Ft.		70,239	

	<u>Unit</u>	<u>Quantity</u>	<u>Total Cost</u>	<u>Unit Cost</u>
Concrete Curb Repair			\$68,269	
Curb Yard				
Redress Granite Sort, Move, Etc. Total	Lin. Ft.	9,620	17,360 14,646 32,006	\$1.805
Crack Sealing				
Sealing Cleanup Total	Lin. Ft.	1,693,795	141,404 14,141 155,545	.0835 .0918
Manhole Casting Reset	Each	658	47,570	72.294
Concrete Pavement Repaired	Sq. Ft.	4,238	10,067	2.375
Sidewalk Reconstructed	Sq. Ft.	57,676	47,125	.817
Mud Jacking			25	
Heater Planing	Lin. Ft.	344,749	53,757	.1559
Slide & Debris Cleanup			38,455	
State Highways				
Asphalt Paving	Sq. Ft.	615	332	.540
Work for Other Bureas & Depts.				
Asphalt Paving Concrete Paving			62,614 14,707	

MUNICIPAL ASPHALT PLANT

Asphaltic mixtures produced at the Municipal Asphalt Plant during 1965-66 were as follows:

COMPOSITION - %						
Mix Designation	<u>Tons</u>	<u>Asphalt</u>	<u>#6</u>	<u>5/16"</u>	<u>5/8"</u>	<u>1 1/4"</u>
Surface	3,360	8 1/2	91 1/2			
School	8,433	7	60	33		
Topeka	37,679	6	45	25	24	
Spreader	183	5 1/2	40	25	17 1/2	12
Binder	607	3 1/2	21	28	22 1/2	25
Cold	198	*	35 1/2	27 1/2	30	
Total	50,460	* 1% asphalt and 6% Pacific specification 300 fuel oil.				

Aggregates were screened into "hot bins" from a combination of Antioch (fine graded) sand, coarse graded sand and three sizes of gravel. Asphalt use was 60 - 70 penetration, paving grade.

Production costs for the 50,460 tons produced during the year were as follows:

Direct Labor	\$55,702 or \$1.10 per ton
Indirect Labor	2,803 or .06 per ton
Overhead	13,307 or .26 per ton
Materials	192,062 or 3.81 per ton
Gas, Electricity, etc.	17,247 or .34 per ton
Total	\$282,218 or \$5.59 per ton

All maintenance work and worn part replacement was done during slack work days or on Saturdays with the following exception. On Tuesday, August 24, 1965, the bearings on the vibrating screen shaft assembly failed. The assembly was replaced and plant operation was resumed on Friday, August 27, 1965.

During June, 1966, the mixer tower section of the plant was cleaned, primed and painted by the Bureau of Building Repair, as a contracted service.

BRIDGES, TUNNELS AND UNDERPASSES

There is little to report regarding the City's three lift bridges, the Broadway Tunnel and the Geary Expressway Underpass. Maintenance and operation continued as previously reported. There were no failures or mishaps of consequence.

Bridge openings during the past year and the previous five years were as follows:

<u>Year</u>	<u>Third Street</u>	<u>Fourth Street</u>	<u>Islais Creek</u>
1965-66	1907	1365	478
1964-65	1866	1627	287
1963-64	2100	1697	391
1962-63	2207	1842	589
1961-62	2122	1650	941
1960-61	1503	1102	962

The increased number of openings at Islais Creek bridge was due to dredging operations in the Islais Channel. It is expected that openings at this bridge will increase even more during the next fiscal year due to reopening of a fish cannery and the reconstruction of adjacent docking facilities in the Islais Creek Channel.

During the coming fiscal year extensive structural work is proposed at the 3rd and Channel bridge, along with painting of the entire facility. Repairs to the leaf lock system at the Islais Creek bridge are also contemplated.

Statistics regarding the Broadway Tunnel ventilation and lighting are as follows:

Ventilation - Blower Operating Time

Year End- ing June 30	<u>North Bore</u>				<u>South Bore</u>			
	<u>Westbound Traffic</u>				<u>Eastbound Traffic</u>			
	<u>Slow</u>		<u>Fast</u>		<u>Slow</u>		<u>Fast</u>	
	Hours	Percent	Hours	Percent	Hours	Percent	Hours	Percent
1966	173.3	1.97	12.6	.14	48.8	.56	27.8	.32
1965	497.8	5.68	16.5	.19	73.1	.83	29.5	.34
1964	657.0	7.48	12.8	.14	52.6	.60	30.0	.34
1963	467.8	5.34	12.0	.13	42.6	.49	27.0	.31
1962	891.3	10.17	19.6	.22	112.8	1.29	32.3	.37

Lighting - Lamps Replaced

	<u>Occasions</u>	<u>72T8's</u>	<u>72T12's</u>	<u>Total</u>
Lamps in Service		1004	332	1336
Replaced During Year	4	1246	110	1356
Previously Replaced	50	6169	480	6649
Totals (Since Dec. 1952)	54	7415	590	8005

Traffic Counts

		<u>Eastbound</u>	<u>Westbound</u>
Tuesday	March 3, 1964	11,589	10,723
Tuesday	December 15, 1959	12,216	10,359
Thursday	July 10, 1958	11,144	9,478
Wednesday	March 16, 1955	10,609	9,795
Monday	August 17, 1953	9,361	8,878
Wednesday	February 11, 1953	8,668	8,770

The tunnel was put into service in December 1952.

The pumping facilities at the Geary Expressway Underpass at Fillmore Street continued to operate satisfactorily during the year. The only replacements required were the storage batteries that supply power for the gasoline engine driven motor generator set.

Pump operating hours during the year and previous years were as follows:

<u>Year</u>	<u>Pump #1</u>	<u>Pump #2</u>
1965-66	289	305
1964-65	277	249
1963-64	380	375
1962-63*	239	246

* Pumps operated for approximately seven months during year.

JUNE 30, 1966



B... .. Budget
I... .. Interdepartmental
"... .. of Budget and
"... .. Interdepartmental

BUREAU OF BUILDING REPAIR

J. Rutherford, Superintendent

The Bureau's primary function is to maintain and repair 316 public buildings as well as provide operational and janitorial services for 107 of these buildings on a budget of approximately \$3.8 million and 400 employees. In addition, maintenance and repairs are performed for other departments by means of budget transfer or interdepartmental work order procedure. A significant portion of this type of work was performed for the following departments:

1. Recreation and Park Department with 300 buildings and structures.
2. Board of Education with 135 school buildings.
3. War Memorial, de Young Museum, Legion of Honor, San Francisco Airport, Academy of Science, etc.
4. Bureau of Engineering:
 - a. Street traffic painting and maintenance of all street name signs.
 - b. Maintenance and repair of street structures, sidewalks, and various monuments.

Maintenance and repair work was accomplished by either a small force of 65 permanent budgeted employees augmented by a variable size group of approximately 109 interdepartmental mechanics, depending upon the work load, or by informal contract. During the year, 80 informal contracts having a total value of \$137,563.00 were awarded to private contractors on a competitive basis.

INTERDEPARTMENTAL WORK

Interdepartmental work performed for the Recreation and Park Department became an important part of last year's activities with over \$300,000.00 in funds being provided. This was an increase of 39% over the previous year. The School Department work load reversed a trend of several years by showing an increase of 4%. During the year, 14,940 requisitions for miscellaneous school repairs were completed which averages 58 per work day. Of this total, 2,856 were emergency requests requiring immediate attention. Work is still being done under the School Department's self-imposed limitation of \$500.00 maximum cost for any one job despite the fact that other departments utilize the Charter limitation of \$5,000.00. The interdepartmental overhead averaged 43.77% compared to 48.04% for the previous year. This reduction can be largely attributed to the increase in interdepartmental work orders and thus greater distribution of costs. The overhead consists of items over which the Bureau has little control such as retirement, workmen's compensation, sick leave, vacations, supervision, truck charges, etc.

SIGNIFICANT CHANGES, PROBLEMS, AND PROGRESS OF THE YEAR

The past year saw the beginning of reduced working hours for the crafts initiated by the new 7 hour day contract for the plumbers and steamfitters which also provides for 10 paid holidays. The other crafts quickly followed suit and within the next two years it is expected that most of the crafts will be on a 35 hour week. This reduction in working hours represents a loss of productivity equivalent to 14 full-time positions in the 7 crafts that have reduced working hours to-date.

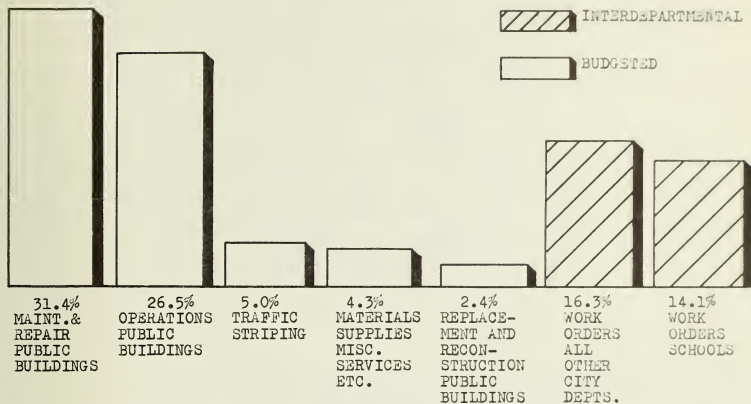
Serious problems developed during the year due to the greatly increased work load from other departments. Additional temporary mechanics and foremen were hired interdepartmentally, but the small budgeted administrative and office staff are being stretched beyond reasonable limits in attempting to provide the required technical assistance, supervision, coordination, and control of this tremendous work load.

Progress has been made in the two important areas of work programming and equipment modernization. By June 15, 1966, all shops had been issued a complete and detailed program of all their budgeted work for the forthcoming year beginning July 1, 1966 including anticipated work from other departments. From this hard core information and estimates on possible additional work from the School Department and others, we were able to estimate the total annual work load and thus the total work force required. The office staff then set up the required accounting records for the control of funds on the 355 separate budget accounts involved.

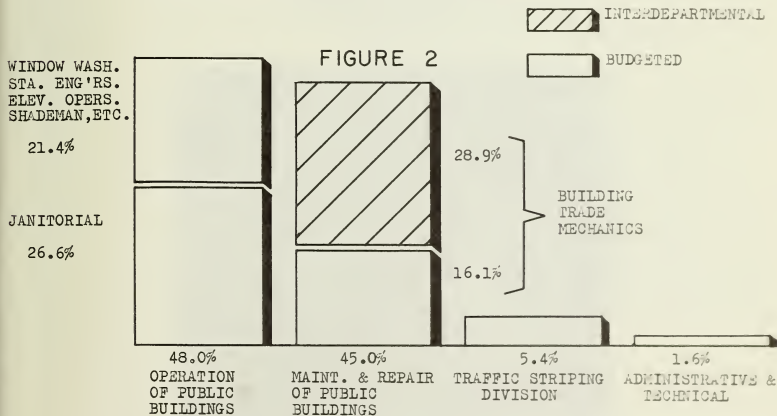
During the year, funds were secured and orders written for \$58,350.00 of equipment and vehicles to replace worn or obsolete items. It has been demonstrated that money spent for new labor saving power equipment and efficient transportation is quickly repaid in reduced costs.

BUREAU OF BUILDING REPAIR

FIGURE 1



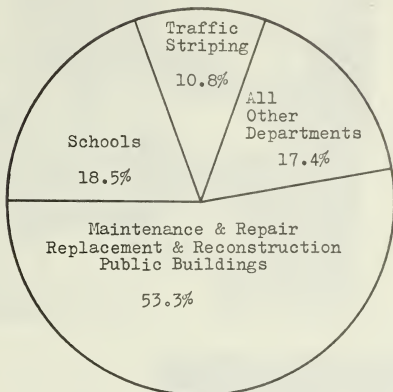
PROPORTIONAL EXPENDITURES OF ALL FUNDS 1965-66



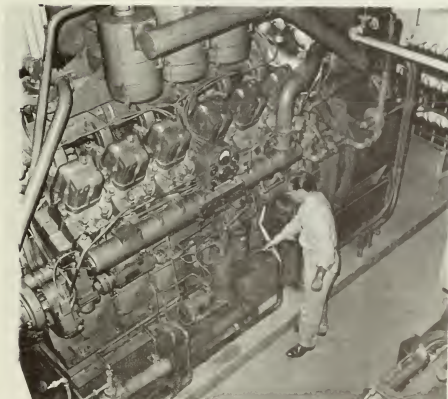
PERSONNEL ASSIGNMENT

BUREAU OF BUILDING REPAIR

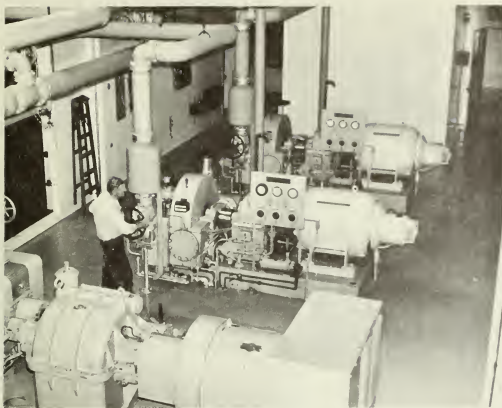
FIGURE 3



ASSIGNMENT OF BUILDING
TRADES PERSONNEL
(195 Employees)

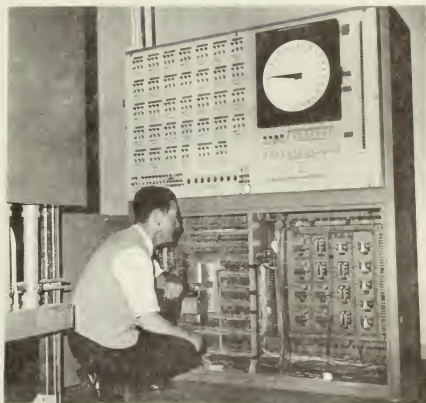


WEEKLY TESTING OF 600 KW EMERGENCY GENERATOR AT HALL OF JUSTICE



ADJUSTING LOAD ON
400 KW ALTERNATOR
AT SAN FRANCISCO
GENERAL HOSPITAL

TROUBLE SHOOTING
ON MASTER CONSOLE
FOR HEATING AND
AIR CONDITIONING
AT CIVIC AUDITORIUM

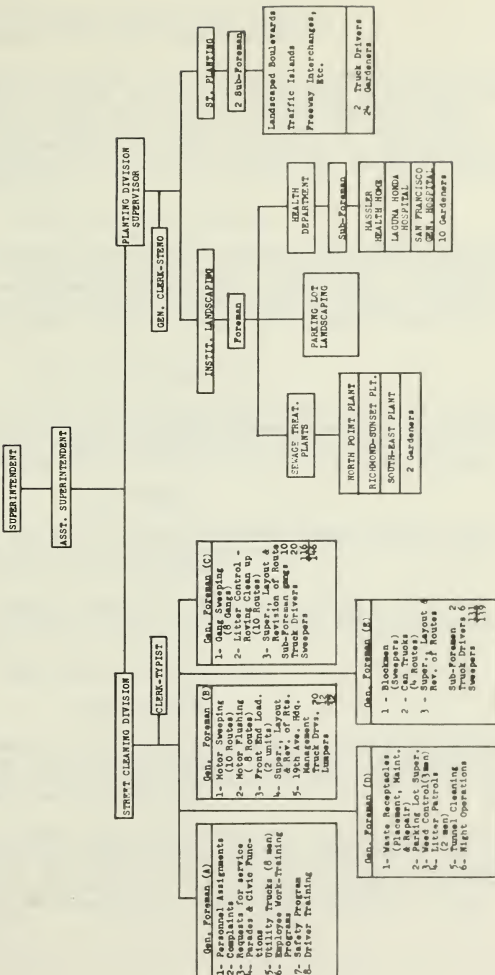


ORGANIZATION CHART

BUREAU OF STREET CLEANING AND PLANTING

CITY AND COUNTY OF SAN FRANCISCO

JUNE 30, 1966



Maintenance and Operation

BUREAU OF STREET CLEANING AND PLANTING Bernard M. Crotty, Superintendent

The Bureau of Street Cleaning and Planting is responsible for the cleaning of 1,720 curb miles of streets, 110 miles of center islands, and the maintenance of over 240 acres of landscaping and 7,600 street trees. During 1965-1966, the Bureau had 379 employees in two divisions and expended \$3,316,974 to conduct its operations. Street cleaning functions required \$3,028,550 and landscape maintenance required \$288,424.

STREET CLEANING DIVISION

In addition to cleaning public street surfaces, the Street Cleaning Division cleans 11 pedestrian and vehicular underpasses, 215 public stairways and 11 neighborhood off-street parking lots. This Division of the Bureau also controls weeded areas and cleans numerous City lots, City College roads, monuments, and several other City owned facilities.

RADIO STATION KME 327

The Department of Public Works radio transmitter, which is located in the Street Cleaning office on Army Street, receives, transmits, and logs all messages from 38 mobile radio units. This radio is monitored by the Bureau from 6:30 A.M. to 5:00 P.M. each working day..

EQUIPMENT

71 units of modern street cleaning equipment logged 498,000 miles transporting over 100,000 cubic yards of refuse to the "fill-and-cover" dump southeast of San Francisco.

Provided through regular budget procedures, the Bureau received replacements for 6 heavy trucks, 1 pick-up truck and other small equipment at a cost of over \$60,000.

Maintenance and Operation

ORGANIZATION

In the Budget request for 1966-1967 this Bureau recommended 2 additional positions on the staff management level and 1 position to provide enforcement of pertinent laws and ordinances regarding the cleanliness of San Francisco streets.

Although we were allowed only 1 new position, that of Assistant Superintendent, this new employee will provide such additional help to our present staff that many efficiencies in personnel assignments and supervision will be realized. One immediate step will be a change-over from a district operation to a functional operation. (See organization chart).

TABLE I

DEPARTMENT OF PUBLIC WORKS
BUREAU OF STREET CLEANING AND PLANTING
CITY & COUNTY OF SAN FRANCISCO, CALIFORNIA
ANNUAL REPORT- GANG SWEEPING - FISCAL YEAR 1965-1966

(Sweeping Frequencies for Gang Route Numbered:)

Month	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
<u>1965</u>												
July	2.22	4.40	3.80	2.22	1.50	2.00	2.20	1.75	2.28	2.22	2.33	*
August	2.44	4.40	3.83	2.56	1.69	2.11	2.18	2.00	2.87	2.37	2.50	
September	1.33	4.50	3.00	1.81	1.25	1.81	1.81	1.81	1.88	2.11	2.00	
October	2.00	4.20	3.60	1.66	1.25	2.00	2.10	1.72	1.66	1.53	2.12	
November	2.20	4.40	4.00	1.62	1.33	2.33	2.40	1.83	2.50	2.62	3.00	
December	2.66	4.60	4.60	3.12	2.00	2.30	3.00	2.09	2.66	2.87	3.14	
<u>1966</u>												
January	2.62	4.20	4.40	2.75	1.75	2.10	2.62	1.90	2.33	2.75	3.00	
February	1.72	4.00	4.75	2.37	1.58	2.37	2.57	1.72	2.25	2.57	2.85	
March	2.87	4.60	5.40	3.00	2.00	2.33	3.28	2.09	2.87	3.14	3.42	
April	2.22	4.20	4.80	2.62	1.75	2.20	2.50	2.00	2.57	2.85	3.33	
May	2.37	4.20	5.00	2.44	1.40	2.33	2.50	2.00	2.66	3.00	2.86	
June	2.62	4.40	5.50	3.50	2.00	2.44	2.62	2.00	2.44	2.33	2.10	
Totals	27.27	52.10	52.68	29.67	19.50	26.32	29.78	22.91	28.97	30.36	32.65	

NOTE: Each Gang is under supervision of a Labor Sub-Foreman and is composed of 4 to 6 hand-sweepers with a truck crew of 1 Chauffeur and 2 Laborers. Length of each route varies from 66 to 270 curb-miles.

* GANG #12 is Weeding Gang.

TABLE 2

DEPARTMENT OF PUBLIC WORKS
BUREAU OF STREET CLEANING AND PLANTING
CITY & COUNTY OF SAN FRANCISCO, CALIFORNIA
ANNUAL REPORT - MOTOR SWEEPING - FISCAL YEAR 1965-1966

Month	Curb Miles Swept	Sweeper Loads (Number)	DISPOSITION OF **15 SWEEPERS (hours)			Downtime* (Percentage)	Average Number of Sweepers in Operation
			Sweeping	Downtime*	Total Work-day Hours		
<u>1965</u>							
July	5,057	292	1,536	1,092	2,628	41.54	8.77
August	5,858	339	1,671	1,113	2,784	39.97	9.00
September	4,476	309	1,366	1,142	2,508	45.51	8.17
October	4,522	283	1,382	1,290	2,672	48.27	7.76
November	5,262	339	1,589	1,075	2,664	40.34	8.95
December	5,120	356	1,588	1,296	2,884	44.93	8.26
<u>1966</u>							
January	5,157	321	1,613	1,043	2,656	39.26	9.11
February	4,235	269	1,318	1,090	2,408	45.26	8.21
March	6,014	385	1,856	1,036	2,892	35.82	9.63
April	5,411	316	1,599	1,041	2,640	39.41	9.09
May	4,348	280	1,332	1,324	2,656	49.84	7.52
June	5,418	353	1,706	1,086	2,792	38.89	9.17
Totals	60,878	3,842	18,556	13,628	32,184	-	-
Averages Per month	5,073	320	1,546	1,135	2,682	42.31	8.65

NOTE: * Downtime includes all work-day time that equipment is not engaged in actual street-sweeping; such as when undergoing repairs, held for servicing or for standby.

** 14 Sweepers + 1 night sweeper = 15 sweepers Total.

TABLE 3

DEPARTMENT OF PUBLIC WORKS
BUREAU OF STREET CLEANING AND PLANTING
CITY & COUNTY OF SAN FRANCISCO, CALIFORNIA
Annual Report - Motor Flushing - Fiscal Year 1965--1966

Month	DISPOSITION OF 10 FLUSHERS (Hours)					Average Number of Flushers in Operation
	Curb Miles Flushed	No. of Stops for Refilling Water Tanks	Flushing	Downtime* Hours	Total Work-Day Hours	
1965						
July	5,435	2,482	1,063	661	1,724	38.31
August	6,140	2,863	1,234	562	1,796	31.28
September	6,099	3,043	1,256	364	1,620	22.45
October	5,745	2,620	1,124	608	1,732	35.10
November	5,656	2,590	1,097	627	1,724	36.35
December	6,041	2,868	1,180	688	1,868	36.80
1966						
January	5,331	2,305	1,038	742	1,780	41.67
February	5,639	2,515	1,081	471	1,552	30.32
March	6,986	3,237	1,345	535	1,880	28.44
April	6,845	3,013	1,302	414	1,716	24.11
May	5,753	2,496	1,068	640	1,708	37.45
June	5,705	2,577	1,119	685	1,804	37.95
Totals	71,375	32,609	13,907	6,997	20,904	-
Averages Per Month	5,947	2,717	1,158	583	1,742	33.45
NOTE: Each flusher is operated with 1 Chauffeur and 1 Laborer for handling flushing controls. * Downtime includes all work-day time that equipment is not engaged in street flushing; such as when undergoing repairs, held for servicing, or standby or when operating on work of different nature.						

NOTE: * Each flusher is operated with 1 Chauffeur and 1 Laborer for handling flushing controls. Downtime includes all work-day time that equipment is not engaged in street flushing; such as when undergoing repairs, held for servicing, or standby or when operating on work of different nature.

OPERATIONS

The following is a graphic description of the several operations which make up our work. Each function is presented in a photo with brief description explaining the operation. Past annual reports contain detailed descriptions of this work.



LITTER PATROL UNIT
RADIO EQUIPPED FOR
ROAMING THE CITY ON
ASSIGNMENT IN ADDITION
TO QUICK RESPONSE TO
EMERGENCIES

FRONT-END LOADER
UTILITY ASSIGNMENTS
UNIT PICKING UP
WEEDS CLEARED FROM
SLOPE IN BACKGROUND





WEEDING GANG ON
VACANT CITY PROPERTY
NOTE LARGE HEAVY WEED
GROWTH



MOTOR FLUSHER
POSITION OF NOZZLES
PROVIDES WIDE SWATH
FOR BETTER COVERAGE

LANDSCAPING & STREET PLANTING DIVISION

This Division of the Bureau of Street Cleaning & Planting was re-named recently from Street Planting Division due to the growth of its operation and responsibilities. To review the operations, the Division is responsible for the planting and maintenance of the City's landscaped boulevards, planted traffic islands, freeway interchanges and areas parallel to the freeway, planting around some of the City's buildings and structures, three sewage treatment plants, neighborhood parking facilities, the extensive grounds of the three City hospitals and approximately 8,000 street trees.

It is interesting to note the expanding growth of this Division which was relatively small when it was transferred from the Recreation & Park Department to the Department of Public Works in 1955. The growth has corresponded with the increasing interest in tree planting and landscaping shown by our City government and by the public. This interest was keen in San Francisco even before President Johnson's National Beauty Program which has had a beneficial influence on all such programs.

The approved 1966-67 Capital Improvement Planting Program reflects this interest. In each annual budget funds are requested to landscape or plant trees along selected main thoroughfares or at points of interest. Funds allowed for this improvement program were very small at first but over a five year period they grew substantially. During 1965-66 some \$60,000 was appropriated which was the largest amount until the 1966-67 budget of \$515,000. Landscape projects presently under way include: Bosworth Street traffic islands landscaping, Civic Center perimeter - street trees, Gough Street - street trees, Lombard Street - street trees, Western Addition - 150 additional street trees.

Funds for the planting program are derived entirely from the City's share of the gasoline tax fund from the State of California.

The following locations and figures detail the approved Capital Improvement Planting Program for 1966-67:

Van Ness Avenue - Washington to North Point Landscape Center Islands	\$ 88,000
Hyde Street - Beach to Greenwich - Sidewalk Trees	23,000
Alemaný & Junipero Serra Overpass - Landscaping	48,000
Castro - Divisadero to Market - Sidewalk Trees	23,500
Brotherhood Way - Lake Merced to Thomas More Landscaping	188,000

Oak Street - Van Ness to Stanyan - Sidewalk Trees	72,500
Mission - More & Whipple - Traffic Island Landscaping	6,600
Potrero - Army to Division - Sidewalk Trees	<u>65,500</u>
Total	\$515,100

Over the years the Division has assumed the maintenance of numerous landscaped areas and many hundreds of newly planted street trees without receiving additional gardener employments. Twenty thousand dollars was allowed in the 1965-66 budget to hire temporary seasonal help to maintain the new obligations. This fund gives us a more flexible operation during the more critical times of the year. For 1966-67 this contractual item was increased to \$30,000 helping somewhat to keep abreast of the increased work load.

IRRIGATION

Funds to replace the old irrigation system on Sunset Boulevard between Lawton and Pacheco Streets were not allowed in the 1965-66 budget but are now included in the 1966-67 budget. The new systems are definitely a good investment, they irrigate more efficiently and economically and with greater safety to the public.

Most of the Neighborhood Parking Lots now have manual automatic timers and are performing well, relieving the gardener of time consuming hand watering.

IN SERVICE TRAINING

Two separate groups of gardeners, of four each, have attended the Spring Semester at the Horticultural Center at City College under the program set up in cooperation with the Recreation & Park Department and Civil Service Commission. It is interesting to note that the men request permission to attend the classes and are definitely better gardeners for doing so.

NEW EQUIPMENT

Funds have been provided in 1966-67 budget to replace one pickup and one utility truck.

A specially treated tank will be purchased for storing liquid fertilizer. The fertilizer will be added to each tank truck of water when irrigating the street trees.

PROMOTION OF THE PRIVATE PLANTING PROGRAM

During 1965-66 the Planting Division office has received more requests for information on planting and has received more applications to plant trees than in any previous year.

The Department of Public Works and "Trees for the City" co-sponsored the 6th Annual Plant A Tree Week with considerable success in that much interest in tree planting was stimulated. Also, along with "Trees for the City" the Department sponsored the third successful Annual Poster Contest in the Junior High and Senior High Schools.

The Department of Public Works and Joseph Schlitz Brewing Company co-hosted the Third Annual Award Luncheon. Public Works Director Myron Tatarian presented 18 awards to various people, schools, writers, associations, contractors, publications and firms for tree planting or encouraging people to plant throughout the year. Joseph Schlitz Brewing Company designed and issued the invitations to a delightful luncheon at their Brown Bottle Room and supplied the impressive awards.

Newspapers, radio and T.V. all contributed to the program by publishing or mentioning planting programs and ceremonies throughout the year. More than 50,000 trees have been planted under this young program. Our goal of 350,000 street trees looks very possible at this time.

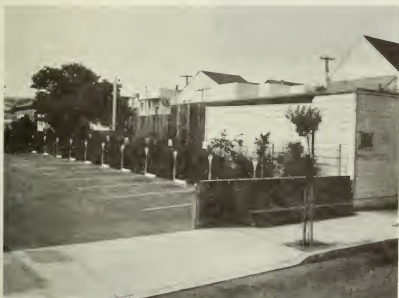
The Bank of America recently published the third edition of the booklet on Trees Recommended for San Francisco. The booklet is available to interested persons upon request.

Many trees which heretofore have not been used locally are recommended in the new edition of the booklet.

In summary it is most emphatically to be stated that San Francisco's tree and landscape program is moving along at a brisk pace. This is, of course, a result of many hard working people and organizations plus a most intelligent and enlightened policy of practical assistance by our elected officials.



SPRAYING FOR WEED CONTROL
AT THE DIVISION NURSERY



ONE OF TEN NEIGHBORHOOD
PARKING FACILITIES
PLANTED AND MAINTAINED
BY THE DIVISION



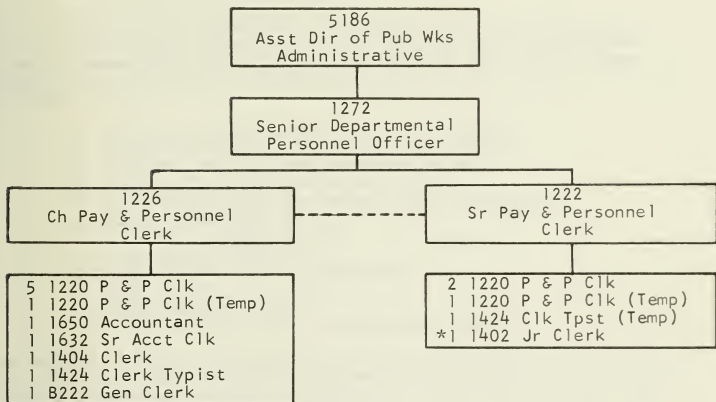
NEWLY LANDSCAPED
TRAFFIC ISLANDS
ALONG VAN NESS
AVENUE

SOUTHERN FREEWAY
PERIMETER ROAD
PLANTED BY THE
STATE DIVISION OF
HIGHWAYS AND
MAINTAINED BY CITY
PLANTING DIVISION



RECENTLY PLANTED TREES IN THE
WESTERN ADDITION--THE TREES
ARE INSTALLED BY CONTRACT FOR
REDEVELOPMENT AND MAINTAINED
BY THE PLANTING DIVISION

ORGANIZATION CHART
BUREAU OF PERSONNEL ADMINISTRATION
Department of Public Works



*Position in General Office budget;
responsibility for assignment only

BUREAU OF PERSONNEL ADMINISTRATION
Albert C. Ambrose
Senior Departmental Personnel Officer

During the fiscal year the moving of payroll and personnel employees from the Army Street Yard was completed; certain personnel reassignments and reclassifications were accomplished; and Room 253, City Hall, was formally established as personnel headquarters for the department. The stage has therefore been set for the formal creation of the new Bureau of Personnel Administration, headed by the Senior Departmental Personnel Officer, Mr. Albert C. Ambrose, to become effective July 1, 1966.

All of the bureau's personnel, listed below, are now located at City Hall with the exception of two 1220 Payroll and Personnel Clerks, permanently assigned to Army Street, and the two Time-keepers (one B222 and one 1404) whose duties put them in the field all day.

- 1 1272 Sr. Departmental Personnel Officer
- 1 1226 Chief Payroll and Personnel Clerk
- 1 1222 Sr. Payroll and Personnel Clerk
- 7 1220 Payroll and Personnel Clerk
- 2 1220 Payroll and Personnel Clerk (temporary)
- 1 1650 Accountant
- 1 1632 Sr. Account Clerk
- 1 1424 Clerk Typist
- 1 1424 Clerk Typist (temporary)
- 1 1404 Clerk
- 1 B222 General Clerk
- 1 1402 Jr. Clerk (see Organization Chart)

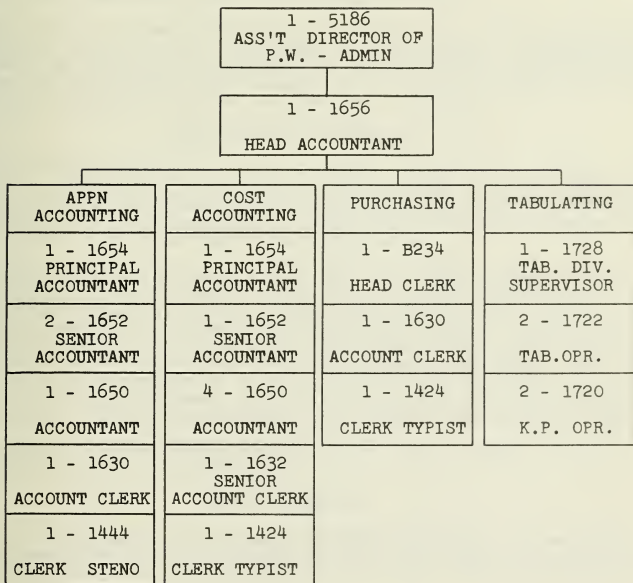
In keeping with the department's policy established in June 1965, all the departmental craft employees are now working the number of hours per day that has been established in their collective bargaining agreements, with the exception of the Painters who will continue on an 8-hour day through September 1966 and then go permanently on a 7-hour day; and the Bricklayers who will continue on an 8-hour day through February 15, 1967 and then go on a 7-hour day for at least the balance of next fiscal year.

During the fiscal year the 7530 Street Cleaners won a court case in which they were awarded a payrate of 90% of the rate paid to 7514 General Laborers. The court decision included a provision to pay this rate to the 7530 Street Cleaners retroactive to July 1, 1962. Pursuant to this court decision, the Bureau of Personnel Administration submitted approximately 220 supplemental timerolls covering approximately 90 positions of 7530 Street Cleaner with hundreds of different incumbents over the time period involved. Retroactive pay warrants will be distributed early in the next fiscal year.

During the fiscal year the bureau prepared and processed a total of 1734 time rolls involving an expenditure of approximately \$15,486,000. Included in this payroll expenditure is a substantial amount for temporary employees and street cleaners' retroactive pay. There was a total of 225 requisitions for permanent civil service employees to replace vacancies due to deaths, resignations, transfers, retirements, etc. Additionally, there were 600 requisitions for temporary civil service employment due to vacation, sick leave, personal leave, reclassification, replacements, etc. However, because of difficulty in recruiting civil service employees, it was necessary to employ 901 non-civil service employees for these authorized positions. The inter-relationship of personnel records to the preparation of these payrolls necessitated 3628 reports to the department physician of new cases of illness to verify legitimacy of sick pay as required by Ordinance. There were also 221 accident reports filed with the necessary follow-up procedure required which are not included in the reports to the department physician.

DEPARTMENT OF PUBLIC WORKS
BUREAU OF ACCOUNTS
ORGANIZATION CHART

JUNE 30, 1966



TOTAL PERSONNEL - 23

BUREAU OF ACCOUNTS

J. Iwamoto, Head Accountant

FUNCTIONS AND ORGANIZATION

The operating functions of the Bureau embrace control of purchase order requisitions, sub-storeroom and inventories; automotive expenditures; work order job costs and invoicing; side sewer job deposits and refund accounts; refundable trust fund deposits, State gasoline tax subventions and bond fund accounts; capital improvement accounts for the General Fund, and Recreation and Park Department Fund; the cash revolving fund; the material stores revolving fund; and budget preparation and controlling accounts.

This Bureau is organized as four divisions under the Head Accountant. They are Appropriation Accounting, Cost Accounting, Purchasing, and Tabulating. The Bureau maintains an office at 2323 Army Street to serve the Maintenance Yard bureaus and an office at 450 McAllister Street, Room 502, to serve the City Hall bureaus.

APPROPRIATION ACCOUNTING

This Division maintains accounts showing allowances, reserves, allotments, expenditures, encumbrances, and balances, for all funds under the control of this Department. These accounts form the basis of controlling all transactions to assure that funds are expended for the purpose for which they were appropriated.

In addition to maintaining all of the operating accounts, this Division handles the fiscal processing of formal contracts covering street improvements, sewers, sewage treatment plants, schools, hospitals, firehouses, recreation and park improvements, and numerous capital projects for other City Departments. When projects are completed from the Special Gas Tax Street Improvement Fund, final financial reports are prepared by this Division and forwarded to the State of California, Department of Public Works, Division of Highways, in accordance with the provisions of the Streets and Highways Code.

The preparation and consolidation of the annual budget is also a responsibility of this Division.

COST ACCOUNTING

This Division maintains accounts showing allowances, expenditures by type, encumbrances, and balances for all work orders received by this Department.

In addition, job costs are maintained for many aspects of the Department's operations such as cost of traffic painting, cost per mile of highway maintenance, cost of side sewer installations and cost of asphalt production. This Division compiles costs to repair damages to City property under the jurisdiction of this Department, and forwards a bill to the responsible party. These costs amounted to \$29,329.73 for Fiscal Year 1965-66 and embraced 246 cases covering damages to automotive equipment, street structures, bridges, street signs, traffic signs, street plantings, traffic signals, traffic devices, and damages to public buildings.

PURCHASING

This Division is responsible for the supplying of equipment, materials, and supplies for the varied activities of this Department, the sub-storeroom and the material yard. During Fiscal Year 1965-66, this Division processed 6,954 requisitions for purchase orders and/or revolving fund orders in the total amount of \$1,588,210.74 involving 34,770 items. In addition, 6,331 delivery orders involving 25,324 items, 11,314 storeroom tags involving the delivery of 33,942 items, and 90 requisitions on the storekeeper involving 1,350 items were issued.

OPERATING BUDGET OF BUREAU

<u>Purpose</u>	<u>Allowances</u>		<u>Expenditures</u>	
	<u>1964-65</u>	<u>1965-66</u>	<u>1964-65</u>	<u>1965-66</u>
Permanent Salaries	212,333	196,717	208,989	192,611
Overtime	900	900	900	900
Holiday Pay	1,142	651	1,109	595
Contractual Services	21,037	1,548	14,199	1,495
Materials and Supplies	3,800	2,540	3,737	2,366
Equipment	945	950	926	926
Services of Other Departments	6,866	7,323	6,814	7,137
E. D. P. - Temporary Salaries	<u>10,732</u>	<u>12,399</u>	<u>10,732</u>	<u>12,399</u>
Total	257,755	223,028	247,406	218,429

WORK ORDERS TO DEPARTMENT

Fiscal Year 1965-1966

<u>Bureau</u>	<u>Number of Cost Accounts</u>	<u>Total Allowance</u>
Architecture	382	\$ 668,686.00
Building Inspection	4	16,900.00
Building Repair	460	1,342,356.94
Engineering	591	1,966,015.00
General Office (Contracts)	<u>79</u>	<u>4,857,542.55</u>
Total	1,516	\$ 8,851,500.49

DEPARTMENT BUDGET

<u>BUREAU</u>	<u>Allowances</u>		<u>Expenditures</u>	
	<u>1964-65</u>	<u>1965-66</u>	<u>1964-65</u>	<u>1965-66</u>
<u>General Fund</u>				
Accounts	257,754	223,028	247,405	218,429
Architecture	90,857	99,447	87,397	91,150
Building Inspection	1,124,449	1,218,462	1,104,103	1,206,021
Building Repair	3,345,064	3,718,099	3,221,438	3,497,314
Traffic Painting	261,845	261,691	250,661	250,666
Central Permit	71,355	75,709	68,261	73,748
Engineering	819,338	919,909	800,404	873,682
General Office	528,934	757,994	519,574	629,397
General Office Improvements	2,092,160	3,433,021	1,868,171	2,210,088
Sewage Pumping Stations	148,664	175,371	138,630	174,203
Sewage Treatment Plants	1,276,999	1,384,665	1,243,291	1,341,484
Sewer Repair	1,330,640	1,425,254	1,437,566	1,522,908
Street Cleaning	2,974,410	3,253,779	2,829,051	3,054,200
<u>Special Gas Tax Street Improvement Fund</u>				
General Maintenance	1,352,901	1,368,718	1,352,500	1,368,431
Construction	1,847,936	2,194,800	1,942,378	1,608,958
Bridges, Tunnels, and Underpasses	227,533	236,157	218,640	216,993
1.04 Cent Funds	2,163,800	1,759,600	209,162	360,656
<u>Road Fund</u>				
Street Repair	2,032,518	2,146,142	1,948,080	2,062,560
Select System Construction		649,600		2,781
Traffic Engineering	1,055,791	1,073,710	991,838	1,016,276
General Maintenance	1,143,244	1,009,840	797,279	702,183
Construction	1,708,914	1,492,034	1,474,962	702,124
Street Planting	273,208	294,601	260,547	286,879
Street Planting Improvements	60,000		44,525	38,042
1.04 Cent Matching Funds	1,083,500	753,000	506,739	529,517
Total	27,271,814	29,934,631	23,562,602	24,038,690

Expenditures for capital improvements may not necessarily match allowances for any given year, since allowances may be forwarded from year to year until the project is completed.

DEPARTMENT OF PUBLIC WORKS

CENTRAL PERMIT BUREAU

ORGANIZATION CHART

DEPARTMENT OF PUBLIC WORKS
ASSISTANT DIRECTOR, ADMINISTRATIVE

CENTRAL PERMIT BUREAU
SENIOR MANAGEMENT ASSISTANT 1844 (Supervisor)

PERMIT ISSUANCE

PRINCIPAL CLERK 1408 (1)
SR. CLERK TYPIST 1426 (1)
CLERK TYPIST 1424 (3)

CASH ACCOUNTING, CORRESPONDENCE, & RECORDS

PRINCIPAL CLERK 1408 (1)
SR. CLERK TYPIST 1426 (1)
JR. CLERK TYPIST 1422 (1)
CLERK-STENO. 1444 (1)
TELLER 4320 (2)

CENTRAL PERMIT BUREAU

Gilbert H. Boreman
Senior Management Assistant

FUNCTIONS

The principal function of the Central Permit Bureau is the issuance of all permits under the jurisdiction of the Department of Public Works, and the collection of appropriate permit fees and deposits. Included are permits covering each aspect of the erection, alteration, demolition and moving of buildings; permits for all types of billboards and signs; permits involving the use of excavations of streets and sidewalks; and all plumbing, gas appliance, and electrical permits.

It is the duty of the staff of the Central Permit Bureau to receive applications for the various types of permits, and route them to appropriate agencies for processing. When the applications are properly approved, the staff collects necessary fees and deposits, and issues the permits.

The Central Permit Bureau is the custodian of public records relevant to permits issued by the Department of Public Works, and of all plans and specifications approved in conjunction with those permits. These records date back to the 1906 Earthquake and are assuming more importance each year in determining the status of buildings affected by our urban renewal program.

Another service performed in this bureau is the assignment of street addresses to all new buildings and the elimination of possible confusion resulting from improper existing numbers. Our official house number records constitute an important source of information for government agencies, realtors, title insurance companies, and other activities concerned with the verification of correct street numbers for buildings.

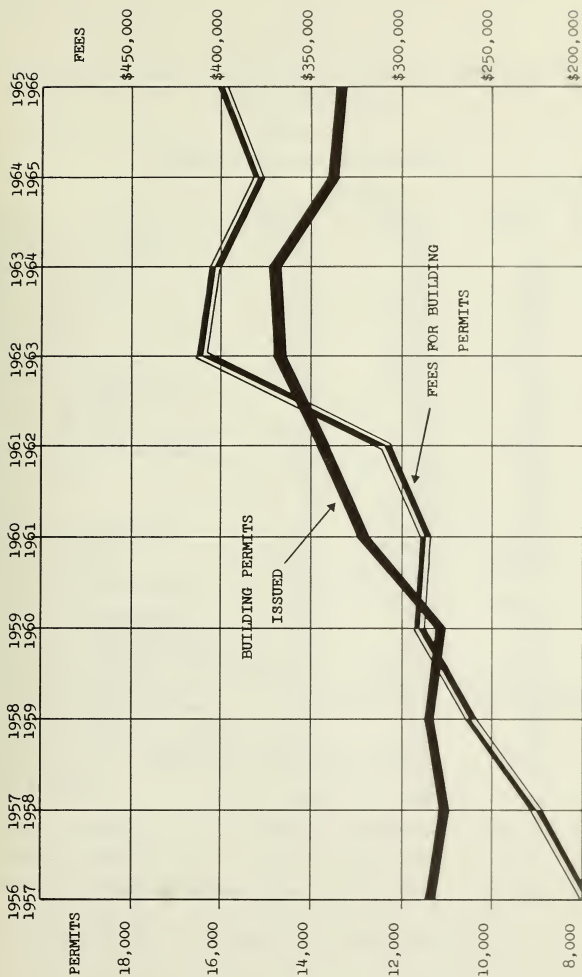
It is a function of the Central Permit Bureau to receive payments for bills covering claims for damages to property under the jurisdiction of the Department of Public Works, and for costs in excess of deposits in the installation of side sewers. The monies collected from these bills, as well as all other monetary receipts of the Department of Public Works, are cleared through this bureau for deposit in the proper funds in the City Treasury.

PERSONNEL

The personnel of the Central Permit Bureau, as of June 30th, 1966, was as follows:

- 1 Senior Management Assistant
- 2 Principal Clerks
- 2 Senior Clerk Typists
- 1 Clerk Stenographer
- 2 Tellers
- 3 Clerk Typists
- 1 Junior Clerk Typist

FISCAL YEAR ENDING



CORRELATION - BUILDING PERMITS AND FEES

THE FOLLOWING TABLES ILLUSTRATE THE SCOPE OF THE ACTIVITIES OF THE
CENTRAL PERMIT BUREAU

TABLE I

PERMITS ISSUED AND FEES RECEIVED

	1965-1966		1964-1965	
	Permits	Fees	Permits	Fees
Buildings	13,336	\$ 398,546	13,510	\$ 377,916
Filing Fee Receipts	7,075	(above)	-	-
Billboard	68	124	39	154
Demolition	431	4,500	540	5,295
Boiler Installation	192	1,402	165	1,222
Boiler Inspection	833	6,050	753	4,945
*Street Space	1,538	133,806	1,675	103,942
House Numbers	608	2,320	806	3,064
House Moving	59	1,180	29	740
Excavations (Pub. Util. etc.)	12,310	24,620	14,250	28,500
*Excavations (Other)	674	3,656	840	2,388
Flue Contr. Registrations	95	1,900	95	1,900
Flues-New Buildings	41	94	42	119
Flues-Old Buildings	137	487	133	628
Flues-New Buildings-Coupons	2,475	1,988	3,575	1,788
Flues-Old Buildings-Coupons	480	1,146	450	900
Posting Notices	566	1,431	759	1,886
Flower Markets	49	1,596	34	1,224
Advertising	13	1,957	5	673
Surveys	23	15,100	18	10,079
Engineering Inspections	87	27,710	80	23,137
Electrical Inspections	12,420	264,351	13,079	360,023
Sign Inspections	2,533	6,245	2,689	5,697
Electrical Sales	2,133	30,558	2,369	30,020
Plant Owner's Registration	10	120	-	-
Plan Checking	7,326	148,800	8,107	131,012
Architect's Investigation	64	960	32	480
Garage Door Coupons	950	2,850	1,725	3,450
Hearings for Code Variances	26	260	16	160
Hearings for Substitute Materials	8	1,200	10	1,500
Plumbing Inspections	20,933	137,250	20,769	184,014
Gas Appliance Inspections		(Included in Plumbing Inspections)		
Journeyman Plumbers License	780	1,560	801	1,602
Gas Appliance Dealer	57	570	57	570
Residential Inspection Reports	9	850	24	1,695
Residential Record Reports	5,907	29,535	7,240	36,200
Dump Permits	7	475	9	655
Blasting Permits	3	36	6	72
Sidewalk Permits	210	1,661	-	-
TOTAL - TABLE I	94,466	\$1,256,894	94,731	\$1,327,650
TOTAL - TABLE II & III	2,447	\$10,875,995	2,721	\$8,294,220
GRAND TOTAL - PERMITS & REVENUE	96,913	\$12,132,889	97,452	\$9,621,870

* Permits and Fees only. See Table II for Refundable Deposits.

TABLE II
MISCELLANEOUS DEPOSITS

REFUNDABLE DEPOSITS	1965-1966		1964-1965	
	Permits	Deposits	Permits	Deposits
Street Space	*	\$ 24,060	*	\$ 32,160
Sub-Sidewalk	36	57,909	57	57,060
Deposit on Plans	1,816	94,900	1,949	74,050
Excavations	*	1,469	*	809
TOTAL	1,852	\$181,213	2,006	\$164,079

*Street Space and Excavations require both a Fee and a Deposit.
Amounts shown are Deposits only.

PARTIALLY REFUNDABLE DEPOSITS				
Side Sewers	467	\$340,549	583	\$386,316
Excess Costs	43	3,728	51	7,389
AMOUNT REFUNDED		\$141,635		\$136,645
New Revenue to be Applied to Installation Costs		\$202,642		\$257,060
AGENCY DEPOSITS				
Street Improvement Bonds	85	\$ 14,941	81	\$ 9,388
TOTAL	2,447	\$540,431	2,721	\$567,172

TABLE III
MISCELLANEOUS REVENUE

	1965-1966 Revenue	1964-1965 Revenue
General Fund	\$ 566,289	\$ 489,353
Road Fund	3,544,935	3,300,229
Highway Trust Fund	23,355	25,350
Special Gas Tax - Street Improvement Fund	6,049,141	3,904,292
Refundable Deposit - Side Sewer 912.3 Fund	1,165	1,300
Litter Control Fund	-	150
Candlestick Park Fund	-	134
Civic Auditorium Bond Fund	-	6,240
1948 Sewage Treatment 810 Fund	12,744	-
1954 Sewer - 812 Fund	67,535	-
1960 Sewer - 824 Fund	6,400	-
Palace of Fine Arts Trust Fund	64,000	-
TOTAL	\$10,335,564	\$7,727,048

TABLE IV
STATEMENT OF CONDITION
SPECIAL FUNDS AS OF JUNE 30, 1966

	June 30, 1965	Deposits 1965-1966	Refunds 1965-1966	Balance June 30, 1966
Spec. Permit Fund (St. Space and Sub- sidewalk Deposits)	\$189,816.70	\$81,969.00	\$42,610.00	\$229,175.70
St. Improve. Fund (Payments of St. Improve. Bonds)	465.27	-	-	465.27
Excavation Fund	2,044.80	1,468.50	929.00	2,584.30
Deposits on Plans	17,707.50	94,900.00	92,650.00	20,057.50

